

# Panasonic

Model No.

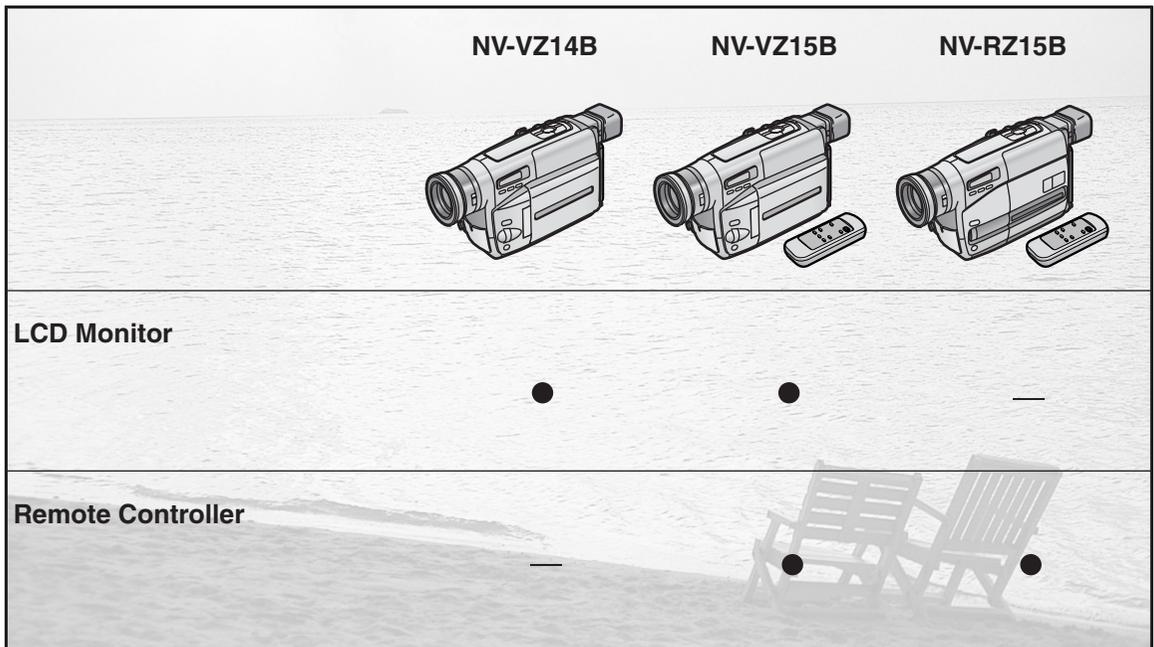
NV-VZ14B

NV-VZ15B

NV-RZ15B

VHS-C Movie Camera

## Operating Instructions



Before use, please read these instructions completely.

**Dear Customer,** We would like to take this opportunity to thank you for purchasing this Panasonic Movie Camera. Please read these Operating Instructions carefully and keep them handy for future reference. Please note that the actual controls and components, menu items, etc. of your Movie Camera may look somewhat different from those shown in the illustrations in these Operating Instructions.

## Information for Your Safety

### Movie Camera

- The rating plate is on the underside of the Movie Camera.

### AC Adaptor

- The rating plate is on the underside of the AC Adaptor.
- As this equipment gets hot during use, operate it in well ventilated place; do not install this equipment in a confined space such as a bookcase or similar unit.
- To reduce the risk of fire, electric shock or product damage, do not expose this equipment to rain, moisture, dripping or splashing and ensure that no objects filled with liquids, such as vases, shall be placed on the equipment.

### Caution for AC mains lead

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three-pin mains plug for your safety and convenience. A 5-ampere fuse is fitted in this plug.

Should the fuse need to be replaced, please ensure that the replacement fuse has a rating of 5-amperes and it is approved by ASTA or BSI to BS1362. Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced. If you lose the fuse cover, the plug must not be used until a replacement cover is obtained. A replacement fuse cover can be purchased from your local Panasonic Dealer.

**IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY.**

**THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.**

If a new plug is to be fitted, please observe the wiring code as shown below.

If in any doubt, please consult a qualified electrician.

### ■ IMPORTANT

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral

Brown: Live

As the colours of the wires in the mains lead of this appliance may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured BLUE must be connected to the terminal in the plug which is marked with the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal in the plug which is marked with the letter L or coloured RED.

Under no circumstances should either of these wires be connected to the earth terminal of the three-pin plug, marked with the letter E or the Earth Symbol .

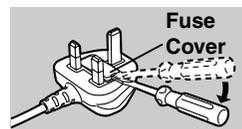
### ■ Before Use

Remove the Connector Cover as follows.

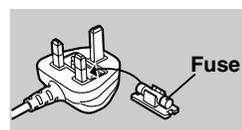


### ■ How to replace the Fuse

1. Remove the Fuse Cover with a screwdriver.



2. Replace the fuse and attach the Fuse Cover.



### Operating Instructions

- These Operating Instructions apply to models NV-VZ14, NV-VZ15, and NV-RZ15.
- The illustrations used in these Operating Instructions show model NV-VZ15, however, parts of the explanation refer to different models.
- Depending on the model, some functions are not available.
- All company and product names in the operating instructions are trademarks of their respective corporations.

**Use only the recommended accessories.**

### ■ WARNING

**Do not remove the cover (or back); there are no user serviceable parts inside. Refer servicing to qualified service personnel.**

### ■ Carefully observe copyright laws.

**Recording of pre-recorded tapes or discs or other published or broadcast material for purposes other than your own private use may infringe copyright laws. Even for the purpose of private use, recording of certain material may be restricted.**

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## Check List for the Standard Accessories



..... AC Adaptor



..... AC Mains Lead



..... Battery Pack

- Standard Accessories are subject to change without notice.
- For purchasing additional Battery Packs, see the list of optional accessories on p. 64



..... AV Cable



..... Shoulder Strap



..... Remote Controller  
(NV-VZ15/RZ15 only)



..... Batteries for  
Remote Controller  
(NV-VZ15/RZ15 only)



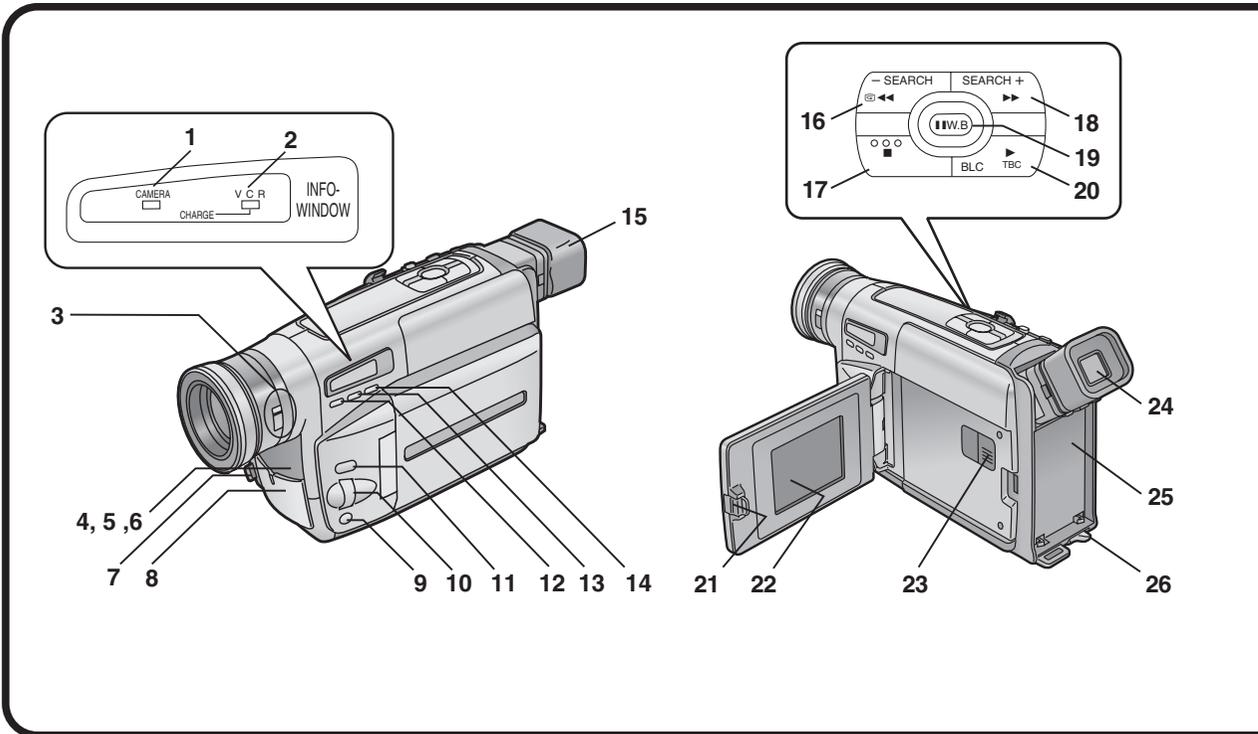
..... Lens Cap

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- Order accessory and consumable items for all Audio Visual Products with ease and confidence either by telephoning our Customer Care Centre on **08705 357357 Mon–Friday 9:00am–5:30pm**.
- Or go on line through our Internet Accessory ordering application at [www.panasonic.co.uk](http://www.panasonic.co.uk).
- Most major credit and debit cards accepted.
- All enquires transactions and distribution facilities are provided directly by Panasonic UK Ltd.
- It couldn't be simpler!

# Controls and Functions

For more details, see the pages indicated in brackets.



- 1 Camera Mode Lamp [CAMERA] (p. 20)
- 2 VCR Mode/Charging Lamp [VCR/CHARGE] (p. 6, 26)
- 3 0-Lux Recording Switch [0 LUX OFF/ON] (p. 42)
- 4 White Balance Sensor (p. 44)
- 5 Remote Control Sensor (p. 52) (NV-VZ15/RZ15 only)
- 6 Built-in Infra-red Beam Emitters (p. 42)
- 7 Lens Cap Holder (p. 9)
- 8 Microphone
- 9 Focus Button [FOCUS] (p. 46)  
Item Set Button [SET] (p. 10)  
Tracking Button (p. 28)
- 10 Multi-Function Dial [▲▼/MF/TRACKING] (p. 10, 28, 47)
- 11 Menu Button [MENU] (p. 10)
- 12 Auto Exposure Selector Button [PROG. AE] (p. 20, 44, 46, 48)
- 13 Fade Button [FADE] (p. 36, 58)
- 14 Super Image Stabilizer Button [SIS] (p. 42)
- 15 Eyecup

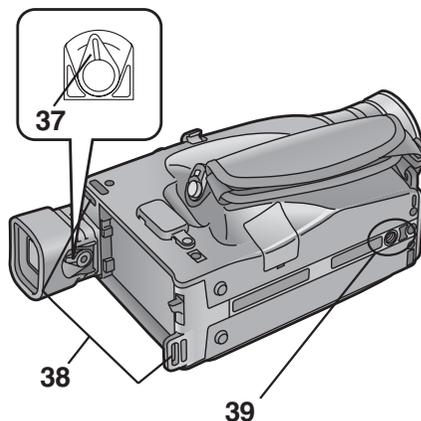
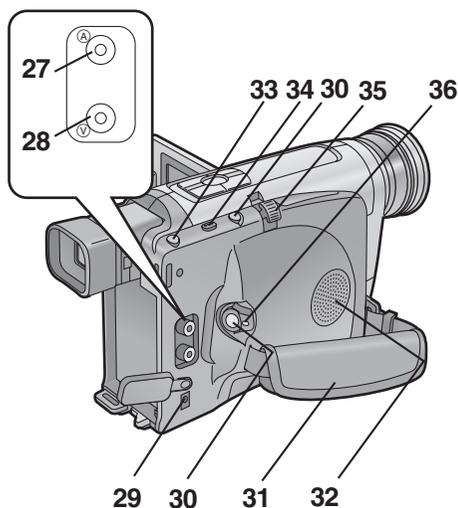
- 16 Reverse Search Button [-SEARCH] (p. 22)  
Rewind/Review Button [◀◀] (p. 26, 28)  
Recording Check Button [Ⓞ] (p. 22)
- 17 Stop Button [■] (p. 27)
- 18 Forward Search Button [SEARCH+] (p. 22)  
Fast Forward/Cue Button [▶▶] (p. 28)
- 19 White Balance Button [W.B] (p. 45)  
Pause Button [||] (p. 29)
- 20 Playback Button [▶] (p. 27)  
Backlight Button [BLC] (p. 22)  
TBC Button [TBC] (p. 27)
- 21 LCD Monitor Open Lever [▲OPEN] (p. 8) (NV-VZ14/VZ15 only)
- 22 LCD Monitor (p. 8, 17, 31) (NV-VZ14/VZ15 only)

Due to limitations in LCD production technology, there may be some tiny bright or dark spots on the LCD Monitor screen. However, this is not a malfunction and does not affect the recorded picture.

- 23 Cassette Compartment Lock Button [LOCK] (p. 19)
- 24 Viewfinder (p. 8, 31)

Due to limitations in LCD production technology, there may be some tiny bright or dark spots on the Viewfinder screen, the whole screen may have a slight colour cast, and flickering may occur. However, this is not a malfunction and does not affect the recorded picture.

- 25 Battery Holder (p. 6)
- 26 Battery Eject Lever [◀BATTERY EJECT] (p. 7)



**27 Audio Output Socket** [A] (p. 30, 62)

**28 Video Output Socket** [V] (p. 30, 62)

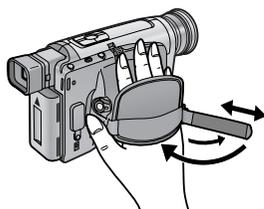
**29 DC Input Socket** [DC IN] (p. 6)

**30 Recording Start/Stop Buttons** (p. 21)

Use either of these buttons depending on the recording angle.

**31 Grip Belt** (p. 9)

You can adjust the Grip Belt to the size of your hand.



Open the Grip Belt Cover and adjust the length of the Grip Belt.

**32 Speaker** (p. 27) (NV-VZ14/VZ15 only)

**33 Cassette Eject Button** [▲ EJECT] (p. 18)

**34 Date/Time/Title Button** [DATE/TITLE] (p. 24, 54, 56)

**35 Zoom Lever** [W/T] (p. 24, 35)

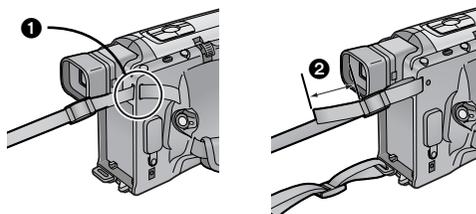
**Volume Adjustment Lever** [-VOL+] (p. 27) (NV-VZ14/VZ15 only)

**36 Off/On Mode Selector Switch** [CAMERA/OFF/VCR] (p. 8, 20, 26, 30)

**37 Eyepiece Corrector Lever** (p. 9)

**38 Shoulder Strap Holders**

Before you go recording outside, we recommend that you attach the Shoulder Strap to prevent the Movie Camera from dropping accidentally.

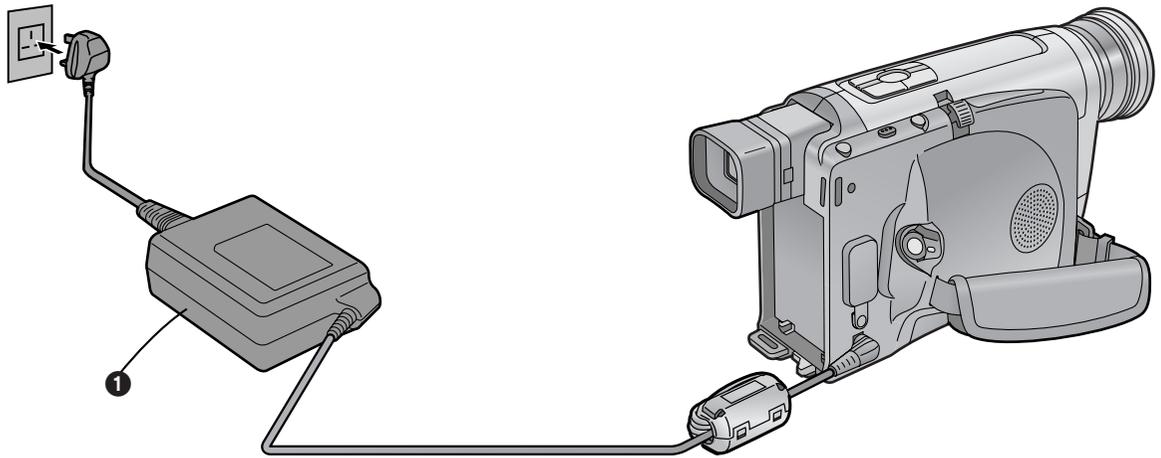


Pull one end of the Shoulder Strap through the Shoulder Strap Holder ①.

Fold the end of the Shoulder Strap back, pull it through the Shoulder Strap Length Adjuster.

Pull it out more than 2 cm ② from the Shoulder Strap Length Adjuster so that it cannot slip off.

**39 Tripod Receptacle**



**Title**

**Procedure**

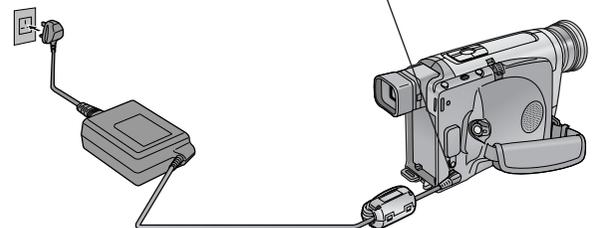
**The 2 Types of Power Supply**

- 1) AC Adaptor ❶ (supplied) to supply power from an AC mains socket
- 2) Battery (supplied)

**Supplying Power from an AC Mains Socket**

**Connect the AC Mains Lead to an AC mains socket.**

**Connect the AC Adaptor to the [DC IN] Socket on the Movie Camera.**

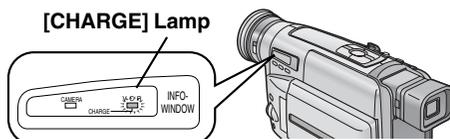


**Supplying Power with the Battery**

Charge the Battery before using it.

**Charging Lamp [CHARGE]**

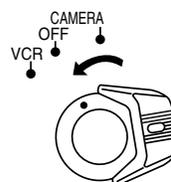
Flashing: During charging  
 Flashing with [CAMERA] Lamp: When error occurs  
 Lit: VCR Mode  
 Off: The Battery is fully charged.



- The [CHARGE] Lamp flashes and charging starts.
- If the [CHARGE] Lamp does not flash even though the Battery is attached, remove the Battery and then re-attach it.

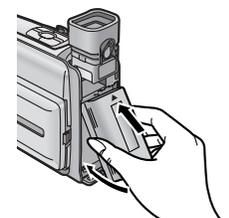
**1**

Set the [CAMERA/OFF/VCR] Switch to [OFF].



**2**

Insert the Battery with its top (so that the arrow points upward) into the top Battery Holder and press the bottom of it toward the Movie Camera until it locks with a click.



### ■ Charging Time and Maximum Time for Continuous Recording

		NV-VZ14/VZ15		NV-RZ15	
CGR-V14 (supplied) CGR-V14S		(A)	1 h 40 min.	(A)	1 h 40 min.
		(B)	2 h 55 min. (2 h 5 min.)	(B)	2 h 55 min.
CGR-V26S		(A)	3 h 10 min.	(A)	3 h 10 min.
		(B)	5 h 25 min. (4 h 5 min.)	(B)	5 h 25 min.
CGR-V53S		(A)	6 h 20 min.	(A)	6 h 20 min.
		(B)	10 h 50 min. (8 h.)	(B)	10 h 50 min.

(A) Charging Time for a Full Charge  
(B) Maximum Continuous Recording Time

(The times shown in the above chart are approximations. The figures in parentheses show the recording time when using the LCD Monitor.)

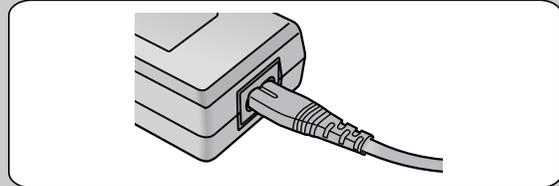
The times listed above for your information indicate the duration of recording performed at an ambient temperature of 25°C and 60% relative humidity. The charging time may be longer when you charge the Battery at higher or lower temperature.

- During recording or charging, the Battery becomes warm. However, this is normal.
- To ensure precise indication of the remaining battery power, always use a fully charged Battery when attaching a Battery.
- If you do not use the Battery for a long time, please read "Precautions for Storage" (p. 67).

### Remarks, etc.

- Always set the [CAMERA/OFF/VCR] Switch to [OFF] before disconnecting the AC Mains Lead.
- **If you use the Movie Camera for a long time, it becomes warm. However, this is normal.**
- Do not use the AC Adaptor for any purposes other than supplying the unit with power or charging the Battery.
- When not using the AC Adaptor, unplug its AC Mains Lead from the AC mains socket. To unplug, pull it by the plug, not by the lead.
- This AC Adaptor works on any mains supply voltage between 110 and 240 V, and any frequency between 50 and 60 Hz. For use in other countries, an adaptor plug may be necessary.
- Before connecting the AC Adaptor to the Movie Camera, be sure to set the [CAMERA/OFF/VCR] Switch to [OFF].

- Be sure to insert the mains plug completely into the correct socket.
- If you have any problems with charging the Battery, refer to page 67.
- Charge the Battery at a room temperature between 10°C and 30°C.
- The AC Mains Lead's outlet plug cannot be pushed fully into the AC Adaptor socket. A gap will remain as shown below.



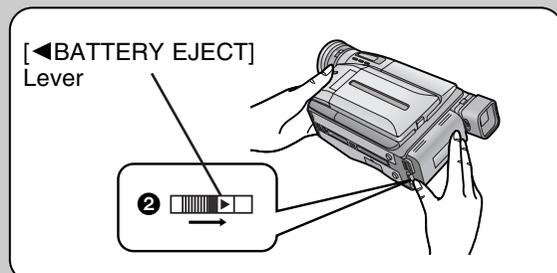
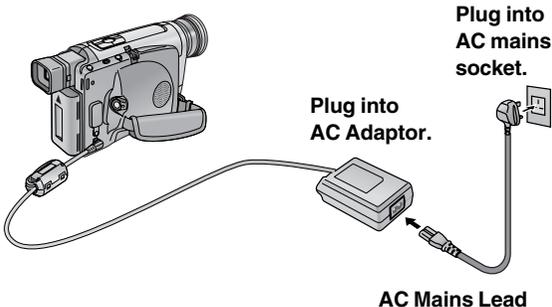
### Removing the Battery from the Movie Camera

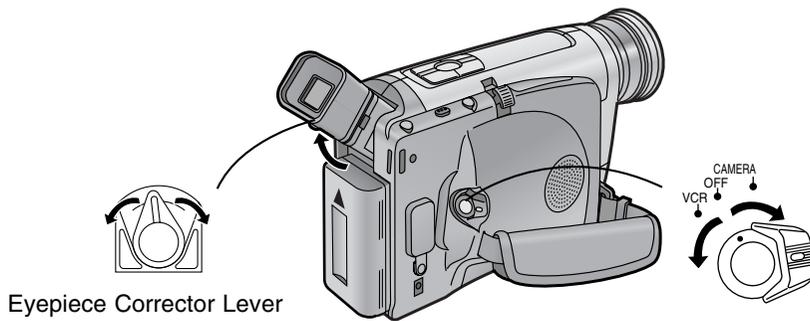
Hold the Battery firmly to prevent it from dropping and pull it off while sliding the [◀BATTERY EJECT] Lever ② in the direction of the arrow.

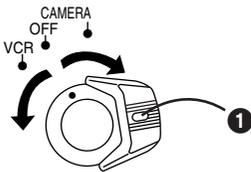
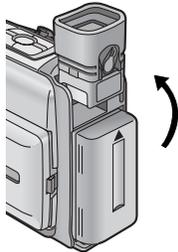
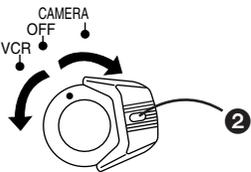
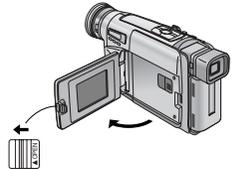
- Be careful not to drop the Battery by accident.
- Before removing the Battery, set the [CAMERA/OFF/VCR] Switch to [OFF].
- Never remove the Battery during recording or playback, because the tape would remain in contact with the video heads and this can cause damage to the heads and tape.

**3**  
Connect the AC Adaptor to the [DC IN] Socket on the Movie Camera.

**4**  
Connect the AC Mains Lead to the AC Adaptor and to an AC mains socket.

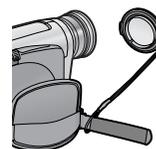




Title	Procedure	
<p><b>Using the Viewfinder</b></p> <p>Before using the Viewfinder, adjust it to your eyesight so that the indications in the Viewfinder are clear and easy to read. Before adjusting the Viewfinder, make sure that the LCD Monitor is completely closed. <b>(NV-VZ14/VZ15 only)</b></p> <p><b>Never aim the Movie Camera with its Viewfinder or Lens directly at the sun; this could damage internal parts of the unit.</b></p> 	<p><b>1</b></p> <p>Set the [CAMERA/OFF/VCR] Switch to [CAMERA] or [VCR]. Turn the switch while pressing the button <b>1</b>.</p> 	<p><b>2</b></p> <p>If necessary, adjust the angle of the Viewfinder by tilting it upward.</p> 
<p><b>Using the LCD Monitor</b> <b>(NV-VZ14/VZ15 only)</b></p> <p>It is also possible to record while viewing the picture on the opened LCD Monitor.</p> <p><b>Relationship between Viewfinder and LCD Monitor</b></p> <p>Opening the LCD Monitor turns off the Viewfinder. Closing the LCD Monitor turns the Viewfinder on again. However, turning the LCD Monitor forward also turns on the Viewfinder again. (p. 47)</p> <ul style="list-style-type: none"> <li>•Due to limitations in production technology, there may be some tiny bright or dark spots on the LCD, however, these are not recorded on the tape.</li> </ul>	<p><b>1</b></p> <p>Set the [CAMERA/OFF/VCR] Switch to [CAMERA] or [VCR]. Turn the switch while pressing the button <b>2</b>.</p> 	<p><b>2</b></p> <p>Slide the [▲ OPEN] Lever and turn out the LCD Monitor approximately 90° in the direction of the arrow. The Viewfinder turns off.</p> 

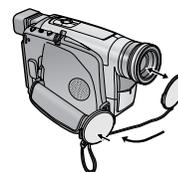
### Attaching the Lens Cap

Attach the shorter loop of the Lens Cap Cord to the Grip Belt.



### You can attach the removed Lens Cap onto the Grip Belt.

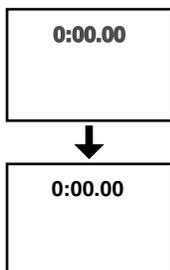
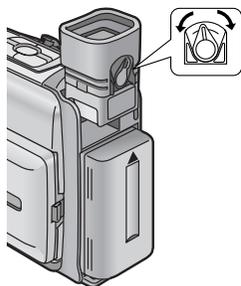
You can attach the Lens Cap to the Lens Cap Holder on the Grip Belt.



- Before you start recording, remove the Lens Cap.
- When not actually recording, always attach the Lens Cap to the Lens to protect it.

## 3

### Adjust by turning the Eyepiece Corrector Lever.



### Remarks, etc.

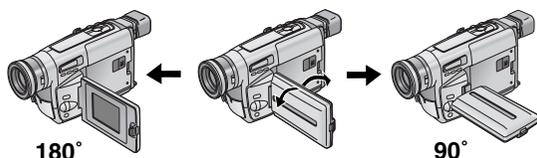
- Do not hold the Movie Camera by the Viewfinder or apply any pressure on it.
- If sunlight or other strong light enters the Viewfinder, sparkling noise will occur on the Viewfinder screen. If you block off the light, this phenomenon disappears after a few minutes and does not affect the recorded picture.
- If a subject with strong contrast or a menu is displayed in the Viewfinder, a ghost image may remain temporarily. However, this is not a malfunction and does not affect the recorded picture.



## 3

### Adjusting the Angle of the LCD Monitor

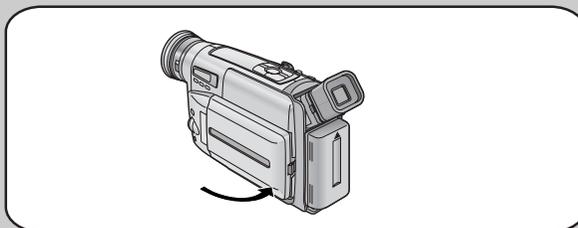
The LCD Monitor rotates upward a maximum of 180° and downward a maximum of 90° from its normal vertical position. Trying to forcefully rotate it beyond this range could seriously damage the Movie Camera.

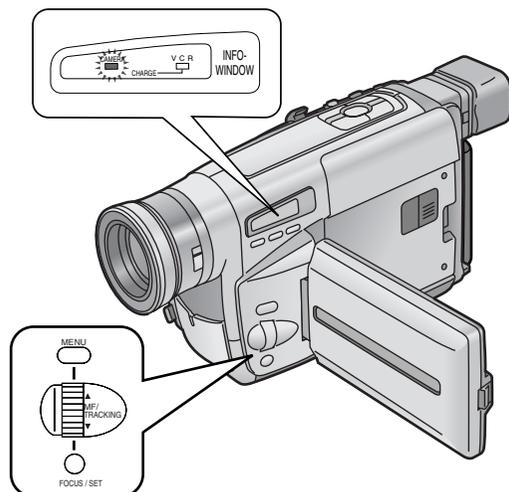


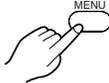
- The picture seen on the LCD Monitor looks slightly stretched vertically, however, the actually recorded picture remains unaffected by this.
- Return the LCD Monitor to its vertical position before closing it. Also, make sure that the Cassette Compartment is securely closed before closing the LCD Monitor.

### Closing the LCD Monitor

Push the LCD Monitor close until the [▲OPEN] Lever locks with a click.

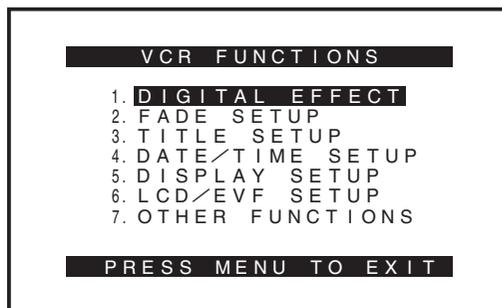
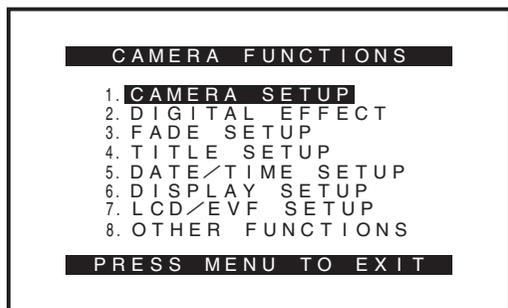




Title	Procedure	
<p><b>Using the Menu Screen</b></p> <p>This Movie Camera displays the settings of various functions in Menus to make it easy to select the desired functions and settings.</p>	<p><b>1</b>  <b>Press the [MENU] Button.</b>            When you press this button while the [CAMERA] Lamp is lit in red, the Camera Mode Main-Menu ① appears. When you press this button while the [VCR] Lamp is lit in green, the VCR Mode Main-Menu ② appears.</p> 	<p><b>2</b>  <b>Turn the [▲▼] Dial to select the desired Sub-Menu.</b>            Turning the [▲▼] Dial changes the highlighted item.</p> 
	<p><b>5</b>  <b>Press the [SET] Button to set the selected item to the desired mode.</b>            Every press moves the cursor [▶] to the next mode.</p> 	

① Camera Mode Main-Menu

② VCR Mode Main-Menu



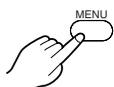
**3**  
Press the [SET] Button to display the selected Sub-Menu.



**4**  
Turn the [▲▼] Dial to select the item to be set.



**Exiting the Menu**  
Press the [MENU] Button again.



**Remarks, etc.**

**Note About the Settings Made on the Menu**  
The settings you selected on the Menu are maintained when you turn the Movie Camera off. However, if you disconnect the power supply unit (Battery or AC Adaptor) from the Movie Camera before turning it off, the selected settings may not be maintained.

- The method for making settings on the [DATE/TIME SETUP] Sub-Menu (p.16) and [LCD/EVF SETUP] Sub-Menu (p. 17) (NV-VZ14/VZ15) or [EVF SETUP] Sub-Menu (NV-RZ15) differs slightly from that of other Sub-Menus.
- You can display the menu during playback, but not during recording. Also, it is possible to start playback while the menu is displayed, but if you start recording, the displayed menu disappears.
- Do not turn off the power while performing a menu operation.
- Turn the [▲▼] Dial slowly. If you turn it fastly, selecting the item may stop halfway.

# Menu Functions

## Camera Mode Menu ①—⑧

**① [CAMERA SETUP] Sub-Menu**

**② [DIGITAL EFFECT] Sub-Menu**

**③ [FADE SETUP] Sub-Menu**

**④ [TITLE SETUP] Sub-Menu**

The illustrations of the menus are for explanation purposes only and the actual menus may be somewhat different.

### Camera Mode Main-Menu [CAMERA FUNCTIONS]

1. CAMERA SETUP
2. DIGITAL EFFECT
3. FADE SETUP
4. TITLE SETUP
5. DATE/TIME SETUP
6. DISPLAY SETUP
7. LCD/EVF SETUP (NV-VZ14/VZ15)  
EVF SETUP (NV-RZ15)
8. OTHER FUNCTIONS

### [CAMERA SETUP] Sub-Menu ①

- ① Motion-Sensor-Controlled Recording [MOTION SENSOR] (p. 40)
- ② Digital Zoom [DIGITAL ZOOM] (p. 34)
- ③ Returning to the Main-Menu [RETURN]
  - If you set [RETURN] to [YES], the menu changes back to the Main-Menu.

### [DIGITAL EFFECT] Sub-Menu ②

- ④ Digital Effects [DIGITAL EFFECT] (p. 32)
- ⑤ Returning to the Main-Menu [RETURN]

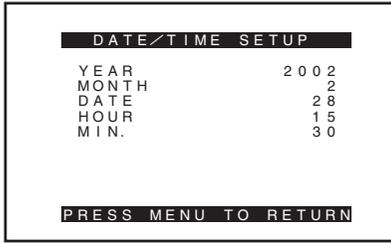
### [FADE SETUP] Sub-Menu ③ (p. 36)

- ⑥ Digital Fade Off/On [DIGITAL FADE] (p. 37)
- ⑦ Fade in [FADE IN] (p. 36)
- ⑧ Fade out [FADE OUT] (p. 36)
- ⑨ Colour of the Digital Fade [FADE COLOUR] (p. 36)
- ⑩ Returning to the Main-Menu [RETURN]

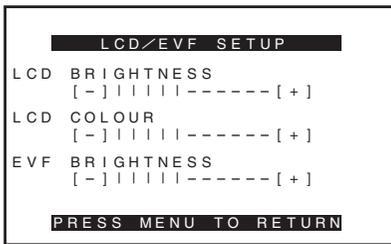
### [TITLE SETUP] Sub-Menu ④

- ⑪ Date/Time/Title Indication [DATE/TITLE] (p. 24)
- ⑫ Title [TITLE] (p. 54)
- ⑬ Language of the Title [LANGUAGE FOR TITLE] (p. 54)
- ⑭ Size of the Title [SIZE] (p. 54)
- ⑮ Colour of the Date/Time/Title Indication [COLOUR] (p. 55)
- ⑯ Returning to the Main-Menu [RETURN]

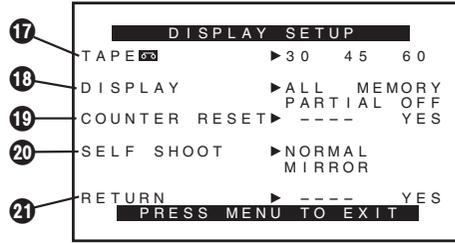
**⑤ [DATE/TIME SETUP] Sub-Menu**



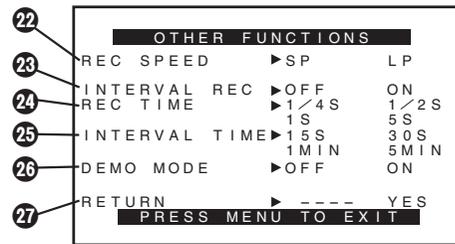
**⑦ [LCD/EVF SETUP] Sub-Menu**



**⑥ [DISPLAY SETUP] Sub-Menu**



**⑧ [OTHER FUNCTIONS] Sub-Menu**



**[DATE/TIME SETUP] Sub-Menu ⑤ (p. 16)**

**[DISPLAY SETUP] Sub-Menu ⑥**

- 17** Tape Length [TAPE] (p. 19)
- 18** Counter Display Mode [DISPLAY] (p. 61)
- 19** Counter Reset [COUNTER RESET] (p. 60)
- 20** Self-Recording [SELF SHOOT] (p. 47)  
(NV-VZ14/VZ15 only)
- 21** Returning to the Main-Menu [RETURN]

**[LCD/EVF SETUP] Sub-Menu ⑦ (p. 17)**  
(LCD Monitor adjustment is only for NV-VZ14/VZ15.)

**[OTHER FUNCTIONS] Sub-Menu ⑧**

- 22** Recording Speed Mode [REC SPEED]
  - You can select the desired recording speed (SP Mode or LP Mode) by selecting the corresponding setting for [REC SPEED] on the [OTHER FUNCTIONS] Sub-Menu. ([SP] means Standard Play. Recording is possible for the time indicated on the cassette. [LP] means Long Play. Recording is possible for approximately double the time indicated on the cassette. )
- 23** Interval Recording [INTERVAL REC] (p. 38)
- 24** Recording Time of Interval Recording [REC TIME] (p. 39)
- 25** Interval Time of Interval Recording [INTERVAL TIME] (p. 38)
- 26** Demonstration Mode [DEMO MODE] (p. 70)
- 27** Returning to the Main-Menu [RETURN]

# Menu Functions (Cont.)

## VCR Mode Menu ①-⑦

### ① [DIGITAL EFFECT] Sub-Menu

```

DIGITAL EFFECT
EFFECT          ▶OFF      ON
DIGITAL EFFECT
▶OFF            B/W
SEPIA          MOSAIC  NEGA
SOLARI         STRETCH
RED FILTER    BLUE FILTER

RETURN          ▶----  YES
PRESS MENU TO EXIT
    
```

### ② [FADE SETUP] Sub-Menu

```

FADE SETUP
DIGITAL FADE OFF ▶ON
FADE IN          ▶SLIDE
FADE OUT         ▶SLIDE
FADE COLOUR
▶BLACK          WHITE
▶YELLOW         RED
▶MAGENTA        BLUE
▶CYAN           GREEN

RETURN          ▶----  YES
PRESS MENU TO EXIT
    
```

### ③ [TITLE SETUP] Sub-Menu

```

TITLE SETUP
DATE/TITLE      DATE TIME+SECONDS
TITLE           BODA
LANGUAGE
FOR TITLE      SPANISH
SIZE           LARGE
COLOUR         MAGENTA

RETURN          ▶----  YES
PRESS MENU TO EXIT
    
```

### ④ [DATE/TIME SETUP] Sub-Menu

```

DATE/TIME SETUP
YEAR           2002
MONTH          2
DATE           28
HOUR           15
MIN.           30

PRESS MENU TO RETURN
    
```

## VCR Mode Main-Menu [VCR FUNCTIONS]

1. DIGITAL EFFECT
2. FADE SETUP
3. TITLE SETUP
4. DATE/TIME SETUP
5. DISPLAY SETUP
6. LCD/EVF SETUP (NV-VZ14/VZ15)  
EVF SETUP (NV-RZ15)
7. OTHER FUNCTIONS

## [DIGITAL EFFECT] Sub-Menu ① (p. 56)

- ① Digital Effect On/Off [EFFECT] (p. 56)
  - All other items on the [DIGITAL EFFECT] Sub-Menu are the same as those on the [DIGITAL EFFECT] Sub-Menu of the [CAMERA FUNCTIONS] Main-Menu.

## [FADE SETUP] Sub-Menu ② (p. 58)

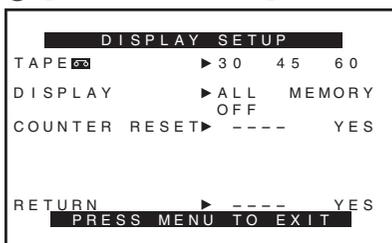
All items on the [FADE SETUP] Sub-Menu are the same as those on the [FADE SETUP] Sub-Menu of the [CAMERA FUNCTIONS] Main-Menu.

## [TITLE SETUP] Sub-Menu ③ (p. 24, 54)

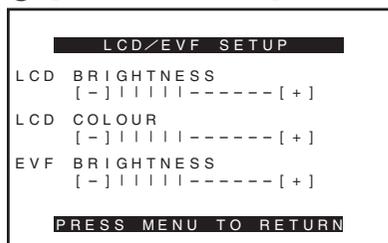
All items on the [TITLE SETUP] Sub-Menu are the same as those on the [TITLE SETUP] Sub-Menu of the [CAMERA FUNCTIONS] Main-Menu.

## [DATE/TIME SETUP] Sub-Menu ④ (p. 16)

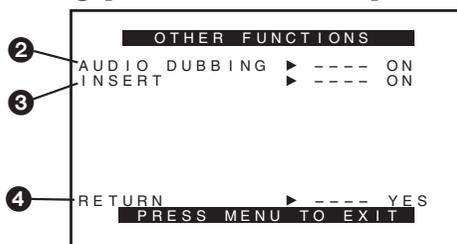
## ⑤ [DISPLAY SETUP] Sub-Menu



## ⑥ [LCD/EVF SETUP] Sub-Menu



## ⑦ [OTHER FUNCTIONS] Sub-Menu

**[DISPLAY SETUP] Sub-Menu ⑤****(p. 19, 60)**

All items on the [DISPLAY SETUP] Sub-Menu are the same as those on the [DISPLAY SETUP] Sub-Menu of the [CAMERA FUNCTIONS] Main-Menu.

**[LCD/EVF SETUP] Sub-Menu ⑥ (p. 17)**

(LCD Monitor adjustment is only for NV-VZ14/VZ15.)

**[OTHER FUNCTIONS] Sub-Menu ⑦**

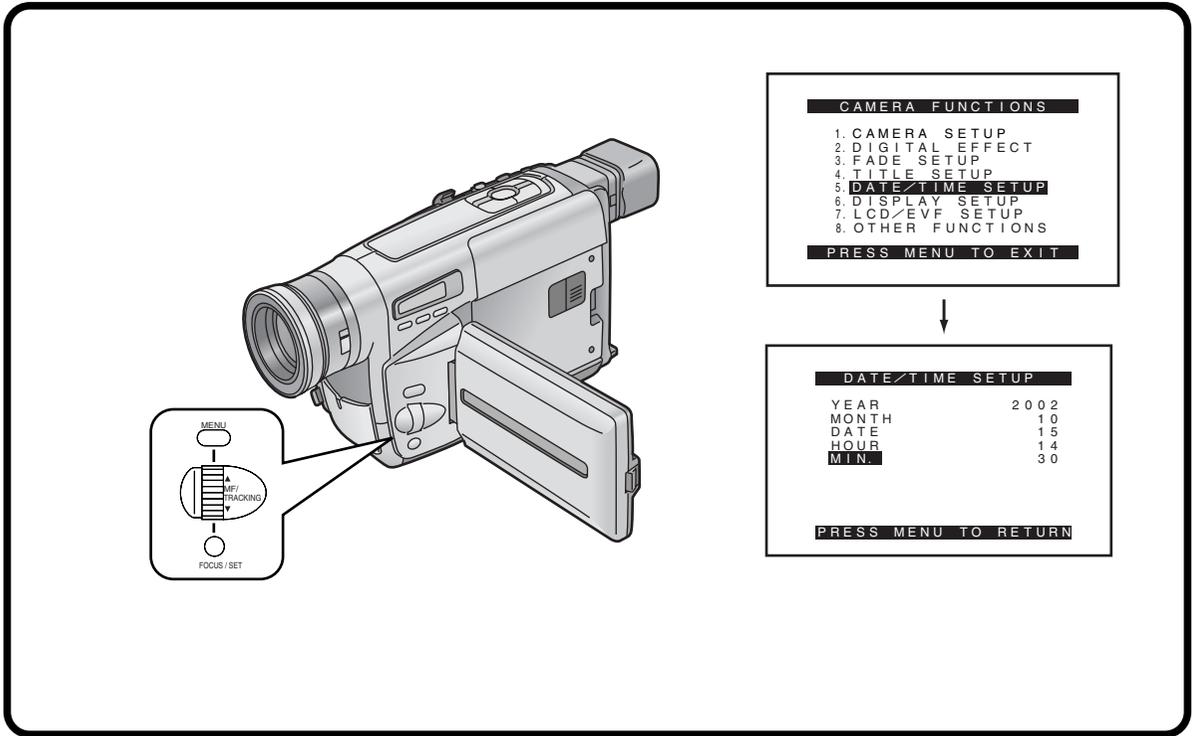
② Audio Dubbing [AUDIO DUBBING] (p. 50)

③ Insert Editing [INSERT] (p. 50)

④ Returning to the Main-Menu [RETURN]

## Setting the Date and Time

If you select the [DATE/TIME SETUP] Sub-Menu of the [CAMERA FUNCTIONS] Main-Menu, the menu shown below appears.



Set the correct date and time before recording.

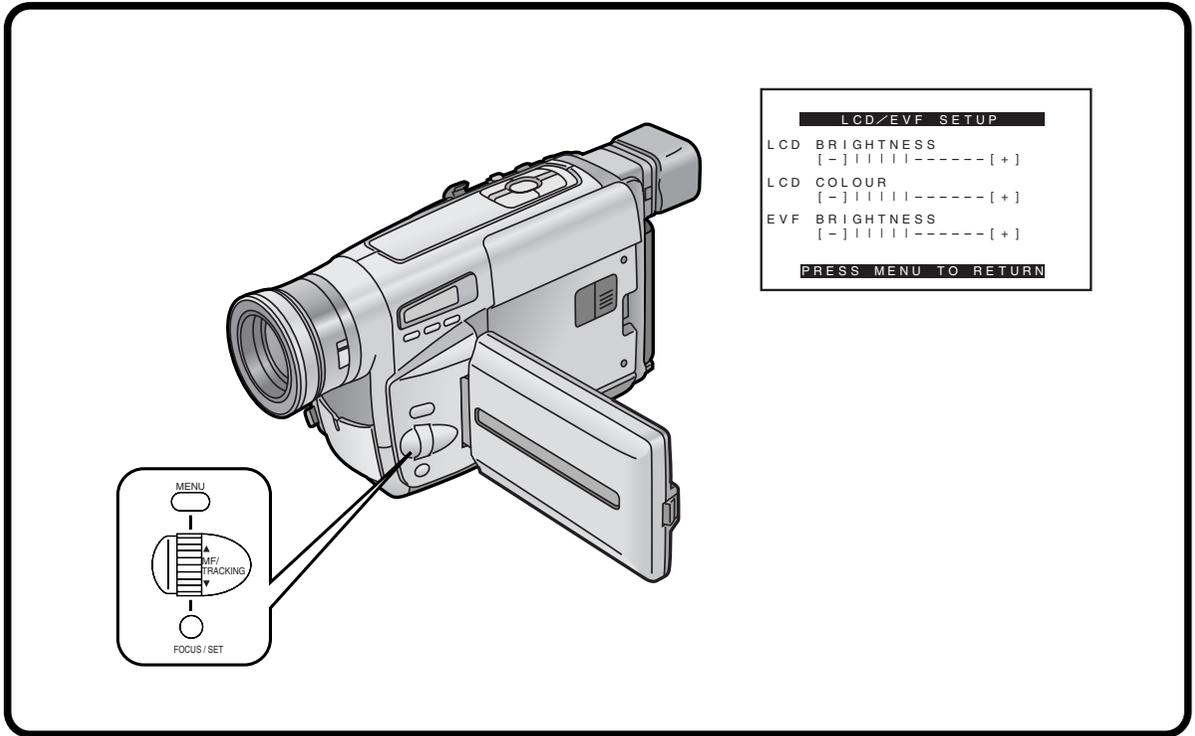
**For example: To set the clock to 15th October 2002, 14:30.**

- 1** Turn the [**▲▼**] Dial to set to [2002].
    - The years change in the following order:  
...1980...1981...2000...2079...1980...
  - 2** Press the [SET] Button to select [MONTH].
  - 3** Turn the [**▲▼**] Dial to set to [10].
  - 4** Press the [SET] Button to select [DATE].
  - 5** Turn the [**▲▼**] Dial to set to [15].
  - 6** Press the [SET] Button to select [HOUR].
  - 7** Turn the [**▲▼**] Dial to set to [14].
  - 8** Press the [SET] Button to select [MIN.].
  - 9** Turn the [**▲▼**] Dial to set to [30].
  - 10** Press the [MENU] Button to finish the date and time setting.
    - The operation of the clock starts from [00] seconds.
    - Pressing the button one more time makes the menu disappear.
- As the Movie Camera's built-in clock is subject to slight imprecision, be sure to check the indicated time before recording.
  - The clock employs the 24-hour system.

## Adjusting the LCD Monitor/Viewfinder

(LCD Monitor adjustment is only for NV-VZ14/VZ15.)

If you select the [LCD/EVF SETUP] or [EVF SETUP] Sub-Menu of the [VCR FUNCTIONS] or the [CAMERA FUNCTIONS] Main-Menu, the following items are displayed.



### LCD Brightness [LCD BRIGHTNESS]

To adjust the brightness of the LCD screen. The more vertical bars are shown, the brighter the screen is.

### LCD Colour Level [LCD COLOUR]

To adjust the colour saturation of the LCD screen. The more vertical bars are shown, the stronger the colours are.

### Viewfinder Brightness [EVF BRIGHTNESS]

To adjust the brightness of the Viewfinder. The more vertical bars are shown, the brighter the screen is.

**1** Press the [SET] Button to select the item that you want to adjust.

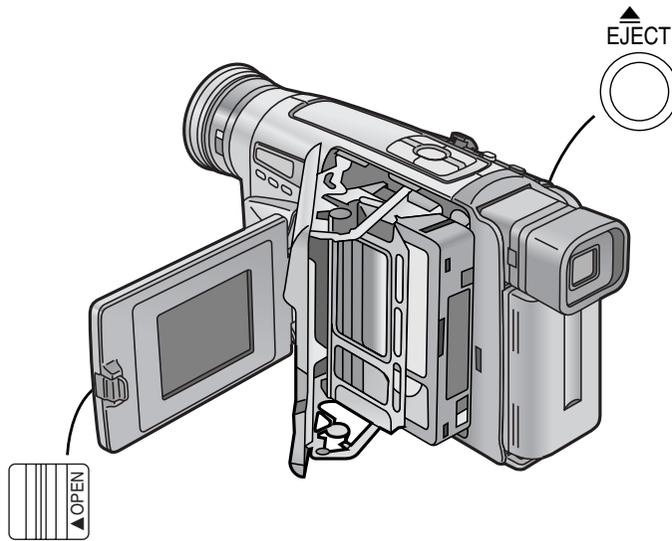
**2** Turn the [▲▼] Dial to increase or decrease the vertical bars of the Bar Indication.

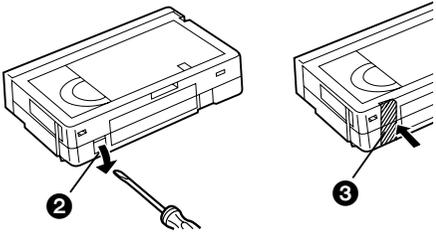
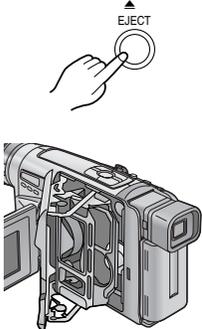
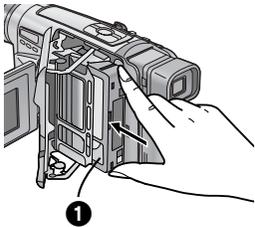
The Bar Indication is divided into 11 steps. The more vertical bars are shown, the stronger the brightness or colour saturation is.

### Exiting the Menu

Press the [MENU] Button twice.

- These adjustments have no influence on the actual picture recorded.



Title	Procedure	
<p><b>Inserting/Ejecting the Cassette</b></p> <p>If the AC Adaptor or Battery is used to supply power, it is possible to insert or eject the cassette without turning on the Movie Camera.</p>	<p><b>1</b></p> <p>Connect the AC Adaptor or attach a charged Battery. (p. 6)</p> 	<p><b>2</b></p> <p>Turn the cog wheel to tighten the tape.</p> 
<p><b>Preventing Accidental Erasure of Recordings</b></p> <ul style="list-style-type: none"> <li>Recording on a previously recorded cassette erases the existing scenes and sound.</li> <li>To protect important recordings against accidental erasure, use a screwdriver to break out the tab <b>2</b> on the cassette (some cassettes have sliding-type tabs).</li> <li>To be able to record again on a protected cassette, firmly cover the hole where the tab was with two layers of adhesive tape <b>3</b>.</li> </ul> 	<p><b>4</b></p> <p>Press the [▲ EJECT] Button.</p> 	<p><b>5</b></p> <p>Insert the cassette with the cassette window <b>1</b> facing outward and push it all the way in.</p> 

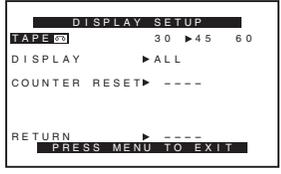
### ■ Selecting the Correct Tape Length

To ensure that the Remaining Tape Time Indication displayed during recording and playback is correct, you need to set the tape length that matches that of the inserted cassette.

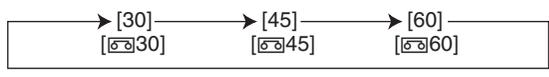
Camera Mode



VCR Mode

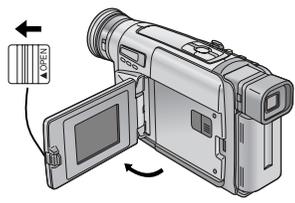


- 1 Press the [MENU] Button.**  
•The Main-Menu appears.
- 2 Turn the [▲▼] Dial to select [DISPLAY SETUP] and then press the [SET] Button.**
- 3 Turn the [▲▼] Dial to select [TAPE].**
- 4 Press the [SET] Button to select the correct tape length.**  
•The selected tape length is marked with the [▶] Mark.  
•The Tape Length Indications change in the following order:

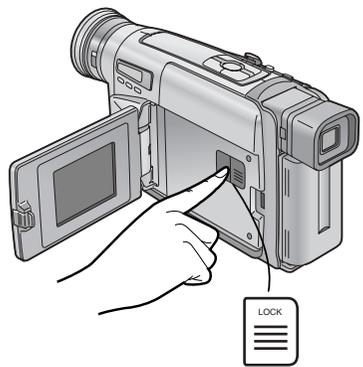


- 5 Press the [MENU] Button to exit the menu.**

- 3**  
**(NV-VZ14/VZ15 only)**  
**Slide the [▲OPEN] Lever to the left and simultaneously open the LCD Monitor in the direction of the arrow approximately 90°.** Be sure to keep the LCD Monitor in its vertical position, so that the Cassette Compartment Cover, when it opens, does not hit the LCD Monitor.



- 6**  
**Close the Cassette Compartment by pressing the [LOCK] Button.**



### Remarks, etc.

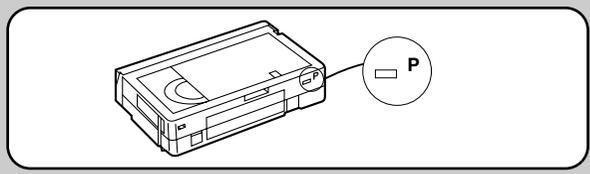
- If a cassette with broken out erasure prevention tab is inserted, the [▶] Indication flashes.
- You will hear noise of tightening the tape when you insert the cassette, and noise of rewinding the tape when you close the cassette compartment. However, this is not a malfunction.

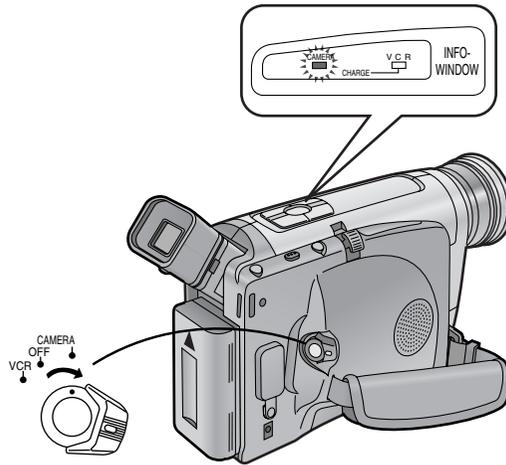
#### Confirming the Remaining Tape Time

During recording and playback, the Remaining Tape Time Indication ④ is automatically displayed, so you always know how much time you have left on the cassette. However, to ensure correct display of the remaining tape time, the tape length of the cassette being used must be set correctly on the Movie Camera.



- If you start recording or playback, the [R] Indication flashes for a few seconds, while the Movie Camera calculates the remaining tape time.
- When recording or playback starts, the Tape Length Indication disappears, and in its place the [R] Indication ④ flashes while the remaining tape time is being calculated. A few seconds later, the Remaining Tape Time Indication appears. ([R] means Remaining.)
- When the remaining tape time is less than 2 minutes, the [R] Indication and the Remaining Tape Time Indication start to flash.
- This function is only meant as a guide. The Remaining Tape Time Indication is subject to imprecision due to either user error (such as incorrectly selected tape length) or stretching of the tape.
- When you use a cassette bearing the [P] mark or other special types of cassettes, the Remaining Tape Time Indication may not be very precise.





**Title**

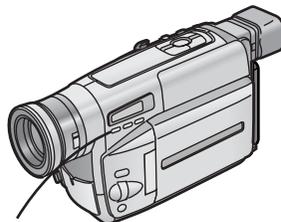
**Procedure**

**Recording (Filming)**

When the [AUTO] Indication appears, you can simply turn on the Movie Camera and press the Recording Start/Stop Button to start recording, and the focus and white balance are adjusted automatically.

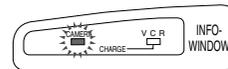
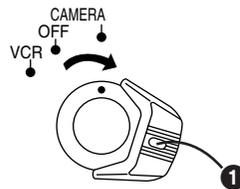
- If the [AUTO] Indication does not appear in the Viewfinder or on the LCD Monitor, press the [PROG. AE] Button repeatedly until the [AUTO] Indication appears.
- Depending on the light source and recording situation, correct automatic focusing and white balance adjustment may not be possible. In such cases, adjust them manually.

Focus: p. 46  
White Balance: p. 44

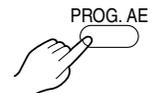


[PROG. AE] Button

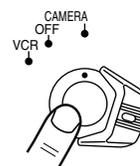
**1**  
Set the [CAMERA/OFF/VCR] Switch to [CAMERA] while pressing the button ❶. The [CAMERA] Lamp lights.



**2**  
Press the [PROG. AE] Button repeatedly until the [AUTO] Indication appears. The initial setting is [AUTO].



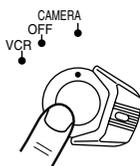
**4**  
To pause recording:  
Press the Recording Start/Stop Button again. The [PAUSE] Indication appears.



### 3

#### Press the Recording Start/Stop Button.

Recording starts and the [▶▶] Indication and the [REC] Indication appear. ([REC] means Recording.)

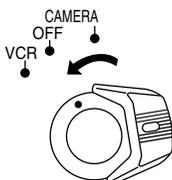


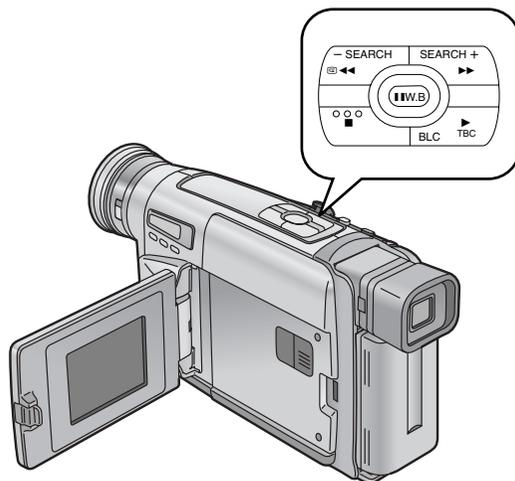
#### Remarks, etc.

- If you leave the Movie Camera in the Recording Pause Mode for more than 6 minutes, it automatically switches off to protect the tape and to conserve battery power. To resume recording from this condition, set the [CAMERA/OFF/VCR] Switch to [OFF] and then to [CAMERA] again.
- During recording, the Programme AE Function (p. 48) is locked. Therefore, even if you accidentally press the [PROG. AE] Button during Recording, the Programme AE Mode does not change.
- Due to limitations in production technology, there may be some tiny bright or dark spots on the LCD, however, these are not recorded on the tape.
- When recording in a dimly lit location, the picture may become noisy and less sharp, so we recommend that you use the IR/Video DC Light (optional), etc. to brighten up the scene.

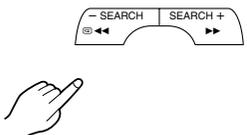
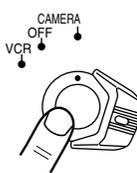
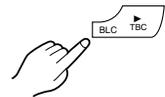
### 5

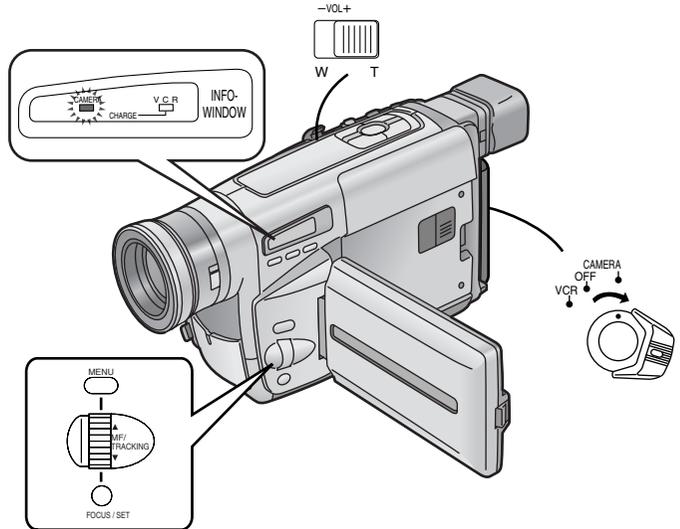
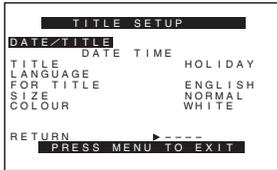
To finish recording:  
Set the [CAMERA/OFF/VCR] Switch to [OFF].





Title	Procedure
<p><b>Checking If the Picture Is Recorded</b> (Recording Check)</p> <p>To play back the final few seconds of the last recorded scene in the Recording Pause Mode.</p>	<p><b>1</b> Press the Recording Check Button  briefly in the Recording Pause Mode. The [CHK] Indication <b>1</b> appears. After checking, the Movie Camera returns to the Recording Pause Mode and is ready for recording the next scene. ([CHK] means Check.)</p> 
<p><b>Viewing Recorded Scenes During Recording Pause</b> (Camera Search)</p> <p>You can view recorded scenes when the Movie Camera is in the Recording Pause Mode. The Camera Search Function is convenient to search for a scene from which you want to start recording a new scene with smooth scene-to-scene transition.</p>	<p><b>1</b> Keep the Reverse Search Button [-SEARCH] or the Forward Search Button [SEARCH+] pressed for more than 1 second.</p> <ul style="list-style-type: none"> <li>• Pressing the [-SEARCH] Button plays back the picture in reverse direction.</li> <li>• Pressing the [SEARCH+] Button plays back the picture in forward direction.</li> </ul> 
<p><b>Recording Backlit Scenes</b> (Backlight Compensation)</p> <p>To prevent the backlit subject from being recorded very dark. (Backlight means that the light falls on the subject from behind, i.e. the subject is between the light source and the Movie Camera.)</p>	<p><b>1</b> Keep the Backlight Button [BLC] pressed. The backlight is being compensated as long as you keep the Button pressed, and the subject is recorded more brightly. (The picture brightens up as a whole.)</p> 

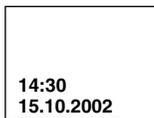
		<b>Remarks, etc.</b>
		<ul style="list-style-type: none"> <li>•For Recording Check, the Movie Camera must be in the same mode (SP or LP) as used for recording, otherwise the playback picture is distorted.</li> <li>•The noise bars may appear when switching from Recording Pause to the last recorded scene.</li> </ul>
<p><b>2</b> Starting to Record from the Desired Position: <b>Release the pressed Search Button.</b> The Movie Camera is in the Recording Pause Mode.</p> 	<p><b>3</b> <b>Press the Recording Start/Stop Button to start recording.</b> The Movie Camera starts recording a new scene with smooth scene-to-scene transition.</p> 	<ul style="list-style-type: none"> <li>•If the Recording Speed Mode (SP/LP) of the previous and the new recording are different, the playback picture may be distorted.</li> </ul>
<p><b>Returning to Normal Recording</b> Release the Backlight Button [BLC].</p> 		<ul style="list-style-type: none"> <li>•The sky may appear whitish.</li> <li>•When recording with the sun striking the subject at an angle, star-shaped light reflections may be recorded in the picture.</li> <li>•When recording a subject in front of a very bright background, the subject may still appear dark in the picture.</li> <li>•In some cases, the subject may look clear, but the background may be overexposed (almost completely white). However, this is normal and not a malfunction.</li> </ul>



Title	Procedure	
<p><b>Enlarging Your Subject or Widening the Recording Angle (Zooming In/Out)</b> Recording close-ups of your subjects and recording wide-angle shots adds special effects to your videos.</p>	<p><b>1</b> To record a wider view (Zooming-out): Push the [W/T] Zoom Lever toward [W]. To enlarge your subject (Zooming-in): Push the [W/T] Zoom Lever toward [T]. The Zoom Magnification Indication appears for a few seconds.</p>	
<p><b>Recording with the Time and/or Date Superimposed in the Picture</b> Confirm that [CAMERA] Lamp is lit.</p> <p><b>Deleting the Date/Time/Title Indication</b> During recording or when the Movie Camera is in the Recording Pause Mode, press the [DATE/TITLE] Button to make the Date/Time/Title Indication disappear.</p>	<p><b>1</b> After displaying the [TITLE SETUP] Sub-Menu... (p. 10): Turn the [▲▼] Dial to select [DATE/TITLE].</p>	<p><b>2</b> Press the [SET] Button to select the desired indication.</p>

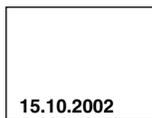
## ■ The Date/Time/Title Indication

1



[DATE TIME]  
Date and Time (h/m)

2



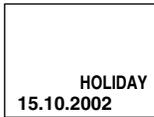
[DATE]  
Date only

3



[DATE TIME TITLE]  
Date, Time and Title

4



[DATE TITLE]  
Date and Title

5



[TITLE]  
Title only

6



[DATE TIME+SECONDS]  
Date and Time (h/m/s)

•The indications change in the order 1 to 6.

## Remarks, etc.

- The further you push the [W/T] Zoom Lever toward [W] or [T], the faster the zooming speed becomes.
- When you have zoomed to the tele setting, precise focusing is only possible on subjects no closer than 1.8 metres.

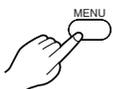
### Recording Extra Close-up Shots of Small Subjects (Macro Close-up Function)

When the zoom magnification is 1×, the Movie Camera can focus on subjects down to a distance of approximately 5 mm between lens and subject. This allows recording very small subjects such as insects.

- When using the Macro Close-up Function, we recommend that you use the IR/Video DC Light (optional), etc. rather than the 0 Lux Night View Function to brighten up the scene.

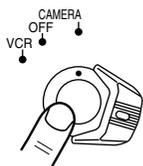
# 3

Press the [MENU] Button to exit the Menu. The selected Date/Time/Title Indication appears.

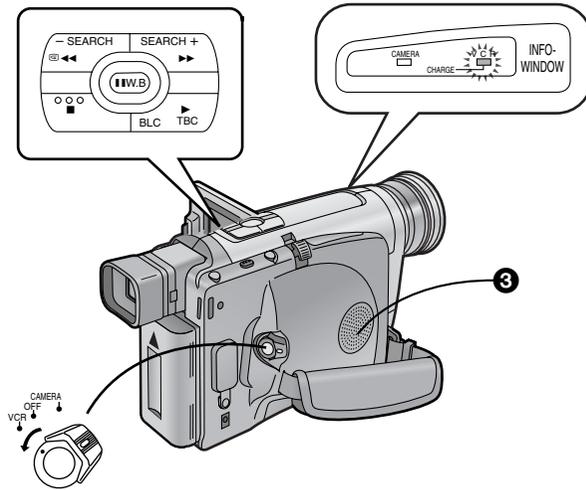


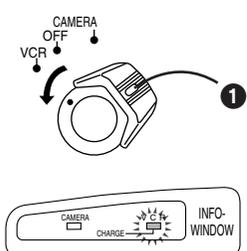
# 4

Press the Recording Start/Stop Button to start recording.



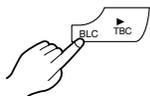
- After turning the Movie Camera off and then on again, the previously selected Date/Time/Title Indication is no longer displayed. To make it appear again, press the [DATE/TITLE] Button once.
- Be sure to turn the Movie Camera off before removing the Battery or disconnecting the AC Adaptor. Disconnecting the power supply while the Movie Camera is on erases the Date/Time/Title Indication (p. 54) stored in memory.



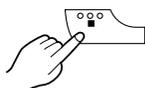
Title	Procedure	
<p><b>Viewing the Just Recorded Scenes on the Movie Camera (Playback)</b></p> <p>You can watch playback of the recorded scenes.</p>	<p><b>1</b> Set the [CAMERA/OFF/VCR] Switch to [VCR] while pressing the <b>Button 1</b>. The [VCR] Lamp lights.</p> 	<p><b>2</b> Press the [◀◀] Button to rewind the tape. Rewind the tape to the point where the recording started. ●When the tape reaches the beginning, the rewinding automatically stops.</p> 
	<p><b>Fast-Forwarding</b> Press the [▶▶] Button in the Stop Mode. ●When the tape reaches the end, it automatically rewinds to the beginning.</p> 	

**3****Press the [▶] Button to start playback.**

- The [▶] Indication ② appears.
- When the tape reaches the end, it automatically rewinds to the beginning.

**4****To stop playback: Press the [■] Button.**

- Never disconnect the AC Adaptor during Playback. This could damage the Movie Camera or the tape.

**Remarks, etc.****■ TBC (Time Base Corrector) Function**

Playback of certain cassettes can cause slight horizontal shaking of the picture or other distortion. To minimize such distortion and ensure a stable playback picture, this Movie Camera is equipped with the TBC Function. This function is automatically activated within a few seconds after playback has started, and the [TBC] Indication appears.

**■ Cancelling the TBC Function**

With certain cassettes, however, the TBC Function could cause slight vertical shaking or other distortion in the playback picture. In this case, first try to adjust the tracking (p. 28). If this does not improve the picture, cancel the TBC Function by keeping the [TBC] Button pressed until the [TBC] Indication disappears. If you want to turn the TBC Function on again, press the [TBC] Button for a few seconds until the [TBC] Indication reappears. Even if you cancel the TBC Function, it is automatically turned back on when you switch the Movie Camera from the Camera Mode to the VCR Mode.

**■ In the Following Cases, the TBC Function Does Not Work:**

- In the Cue, Review or Still Playback Mode
- When using the Camera Search or Recording Check Function
- When adjusting the tracking
- When playing back an unrecorded part on the tape

When you play back a cassette with stretched, shrunk or otherwise damaged tape, the TBC Function does not work correctly (it may repeatedly turn on and off). In this case, cancel the TBC Function.

**■ Adjusting the Sound Volume (NV-VZ14/VZ15 only)**

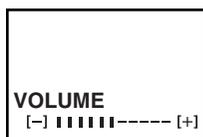
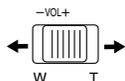
Push the [-VOL+] Lever toward [+] to increase the volume or push it toward [-] to decrease the volume. The [VOLUME] Indication appears and the number of bars increases or decreases. When you release the Lever, this indication disappears.

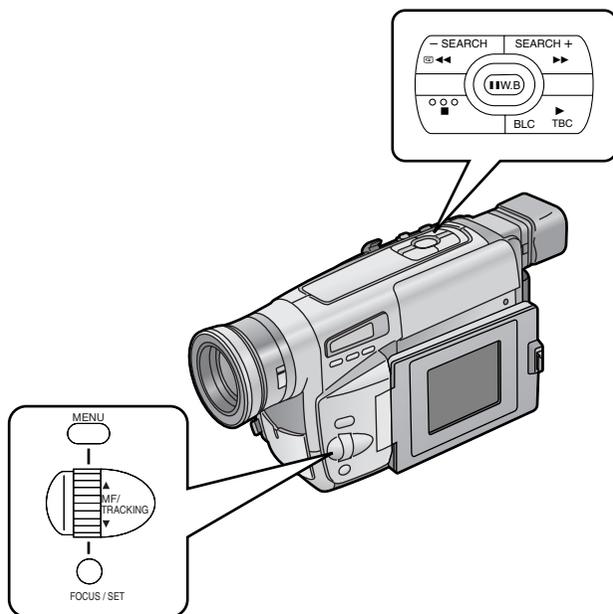
You can also adjust the volume with the \*Remote Controller. Increase the volume by pressing the [T] Button, or decrease it by pressing the [W] Button.

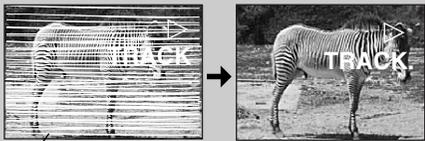
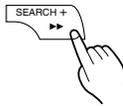
This adjustment is only possible during playback.

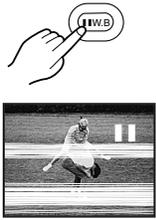
\*Remote Controller: **NV-VZ15 only**

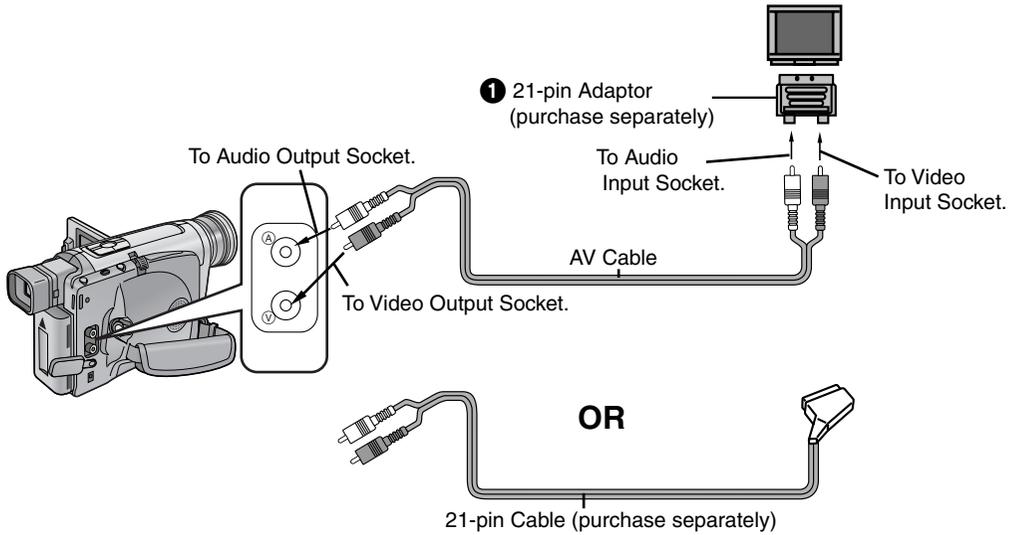
- Because the speaker contains a magnet, do not bring a cassette near the speaker ③. It could adversely influence the recorded content.

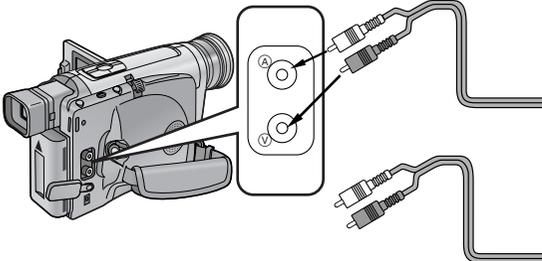
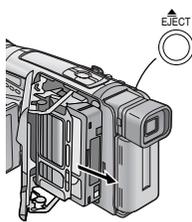
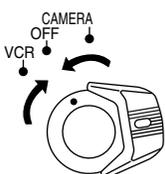




Title	Procedure	
<p><b>Eliminating Picture Distortions (Manual Tracking Adjustment)</b></p> <p>This Movie Camera adjusts the tracking automatically. With certain cassettes, however, the tracking adjustment may not be precise. In this case, adjust the tracking manually.</p>  <p>White noise bars</p>	<p><b>1</b></p> <p>Press the [FOCUS/SET] Button briefly during playback. The [TRACK.] Indication appears.</p> 	<p><b>2</b></p> <p>Turn the [TRACKING] Dial to adjust the tracking.</p> 
<p><b>Using the Cue, Review and Still Playback Functions During Normal Playback</b></p> <p>Perform the following operations with the Movie Camera in the VCR mode ([VCR] Lamp lights) and in the Normal Playback Mode.</p>	<p><b>Cue Playback</b></p> <p>Keep the [▶▶] Button pressed during playback.</p>  	<p><b>Review Playback</b></p> <p>Keep the [◀◀] Button pressed during playback.</p>  

		<b>Remarks, etc.</b>
<p><b>Returning to the Auto Tracking Mode</b> Press the [FOCUS/SET] Button for more than 2 seconds during playback.</p>		<ul style="list-style-type: none"> <li>•The Tracking Adjustment Function is automatically cancelled when the [TRACKING] Dial is not turned for 5 seconds.</li> <li>•It may not be possible to remove the noise bars completely.</li> <li>•It is not possible to adjust the tracking when a menu is displayed.</li> <li>•If you eject the cassette after adjusting the tracking, the adjusted setting is cancelled.</li> </ul>
<p><b>Search Lock Function</b> For longer Cue or Review Playback, press the Cue Button [▶▶] or the Review Button [◀◀] only briefly. As this locks the search function, you do not need to keep the button pressed for a long time.</p> <ul style="list-style-type: none"> <li>•To resume normal playback, press the [▶] Button.</li> </ul>	<p><b>Still Playback</b> Press the [■] Button during Normal Playback. To return to Normal Playback, press the [■] Button again.</p> 	<ul style="list-style-type: none"> <li>•If you leave the Movie Camera in the Still Playback Mode for about 6 minutes, it automatically switches over to the Stop Mode. And, if the Movie Camera is being powered by the Battery, it switches off completely after a further 6 minutes.</li> <li>•The sound is played back only during normal playback.</li> <li>•In the Cue, Review and Still Playback Modes, horizontal noise bars appear in the picture, or the picture may become black and white or distorted.</li> <li>•The horizontal noise bars have a different pattern in the SP mode and LP mode.</li> <li>•During Cue or Review Playback, no indications are displayed.</li> </ul>

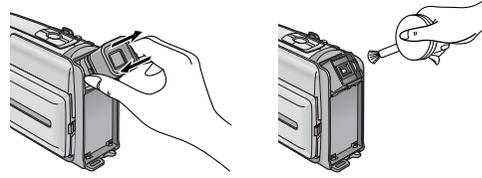


Title	Procedure	
<p><b>Play Back on a TV</b></p> <p>By connecting the Movie Camera to a TV, you can watch playback of the recorded scenes on the TV screen.</p>	<p><b>1</b></p> <p><b>Connect the Audio Output Socket [A] and the Video Output Socket [V] on the Movie Camera with the audio and video input sockets on the TV.</b></p> <p>Use the AV Cable (supplied) to connect the Movie Camera with the TV.</p> 	
<p><b>After Use</b></p>	<p><b>1</b></p> <p><b>Take out the cassette.</b> (p. 18)</p> 	<p><b>2</b></p> <p><b>Set the [CAMERA/OFF/VCR] Switch to [OFF].</b></p> 

### ■ Cleaning the Viewfinder

If dust has entered the Viewfinder...

- 1 Push the Buttons on both sides of the Viewfinder and remove it in the direction of the arrow.**
- 2 Remove dust with a blower brush (not supplied).**  
If you use a cotton swab or similar to clean the inside of the Viewfinder, use it very carefully to prevent scratching the screen inside the Viewfinder.
- 3 To re-attach the Viewfinder, push it forward onto the Viewfinder Tube until it locks with a click.**



### Cleaning the LCD Monitor (NV-VZ14/VZ15 only)

Clean the LCD Monitor with a soft cloth or a blower brush.

### Cleaning the Movie Camera Body

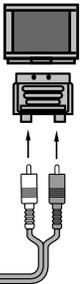
Wipe it with a soft cloth.

### Cleaning the Lens

Clean the lens with a soft cloth or a blower brush.

### Remarks, etc.

- Before connecting, turn off both the Movie Camera and the TV for safety's sake.
- If your TV is not equipped with audio and video input sockets, an 21-pin Adaptor ❶ (purchase separately) is necessary. Consult your dealer.



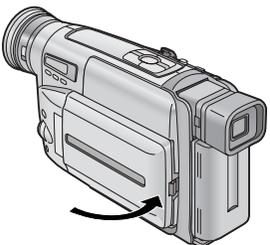
On the TV, select the AV input channel which corresponds to the audio and video input sockets that you have connected the Movie Camera to.

OR



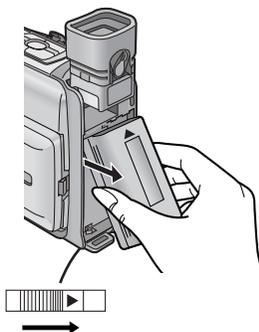
### 3

**Close the LCD Monitor.**  
(NV-VZ14/VZ15 only)



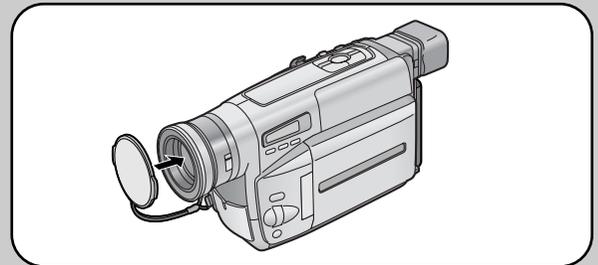
### 4

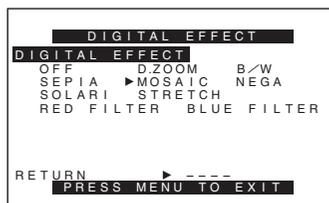
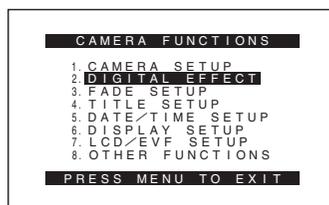
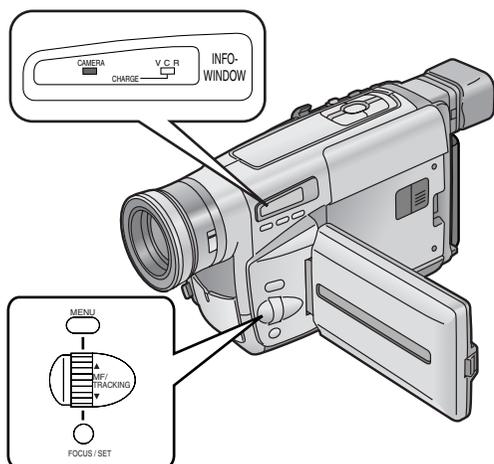
**Remove the Battery.**  
(p. 7)

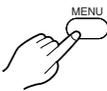


### Attaching the Lens Cap

After use, attach the supplied Lens Cap to the Lens to protect it.





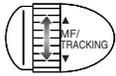
Title	Procedure	
<p><b>Recording with Special Effects (Digital Effects)</b></p> <p>In addition to the Digital Zoom, this Movie Camera offers you various digital effect modes to make it easy to enhance your scenes in many creative ways.</p>	<p><b>1</b></p> <p>Press the [MENU] Button. The [CAMERA FUNCTIONS] Main-Menu appears.</p> 	<p><b>2</b></p> <p>Turn the [▲▼] Dial to select [DIGITAL EFFECT] and then press the [SET] Button. The [DIGITAL EFFECT] Sub-Menu appears.</p> 
<p><b>Digital Effects [DIGITAL EFFECT]</b></p> <ol style="list-style-type: none"> <li><b>1 Digital Zoom Mode [D.ZOOM] (p. 34)</b> It enlarges the subject beyond the optical zooming range.</li> <li><b>2 Black &amp; White Mode [B/W]</b> The picture is in black and white.</li> <li><b>3 Sepia Mode [SEPIA]</b> Scenes have a brown tint similar to the colour of old photographs.</li> <li><b>4 Mosaic Mode [MOSAIC]</b> The picture becomes mosaic-like.</li> <li><b>5 Negative Mode [NEGA]</b> The picture has reversed colours similar to photographic negatives.</li> </ol>		

**1****2****3****4****5****6****7**

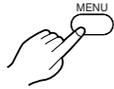
### Remarks, etc.

**3**

Turn the [▲▼] Dial to select [DIGITAL EFFECT] and then press the [SET] Button to select the desired digital effect.

**4**

Press the [MENU] Button to exit the Menu.

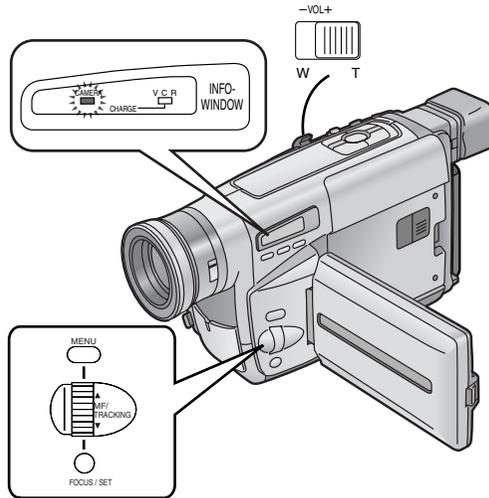


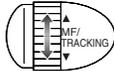
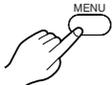
- If you set the [CAMERA/OFF/VCR] Switch to [OFF] and then set it to [CAMERA] again, the indication of the selected digital effect flashes for a few seconds to inform you of the selected setting.
- If you have set [DIGITAL EFFECT] on the [DIGITAL EFFECT] Sub-Menu to [B/W], [SEPIA], [RED FILTER] or [BLUE FILTER], it is not possible to manually adjust the white balance.

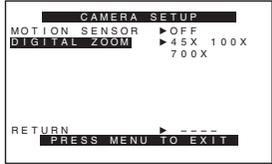
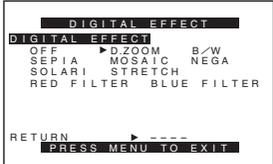
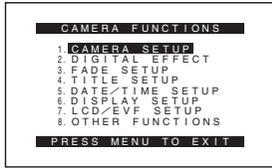
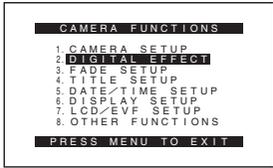
### Cancelling the Digital Effect

Set [DIGITAL EFFECT] on the [DIGITAL EFFECT] Sub-Menu to [OFF].

- 6 Solarisation Mode [SOLARI]**  
The picture has an effect similar to a painting.
- 7 Stretch Mode [STRETCH]**  
The picture is stretched horizontally while its height remains unchanged.
- 8 Red Mode [RED FILTER]**  
The picture becomes reddish.
- 9 Blue Mode [BLUE FILTER]**  
The picture becomes bluish.



Title	Procedure	
<p><b>Using the Digital Zoom Function</b></p> <p>This function is convenient when you want to enlarge a very distant subject even more than is possible with the normal (optical) zoom which offers a magnification range of 1×–18×. For the Digital Zoom Function, you can choose between up to 45×, up to 100× and up to 700× magnification.</p>	<p><b>1</b> After displaying the [DIGITAL EFFECT] Sub-Menu... (p. 32) Turn the [▲▼] Dial to select [DIGITAL EFFECT].</p> 	<p><b>2</b> Press the [SET] Button to select [D.ZOOM].</p> 
	<p><b>5</b> Press the [SET] Button to select the desired digital zoom range (up to 45×, up to 100× or up to 700×).</p> 	<p><b>6</b> Press the [MENU] Button to exit the Menu. The [D.ZOOM] Indication appears.</p> 

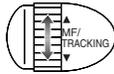


**Remarks, etc.**

**3**  
Turn the [▲▼] Dial to select [RETURN] and then press the [SET] Button to select [YES]. The [CAMERA FUNCTIONS] Main-Menu appears.

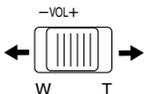


**4**  
Select [DIGITAL ZOOM] on the [CAMERA SETUP] Sub-Menu. (p. 10)

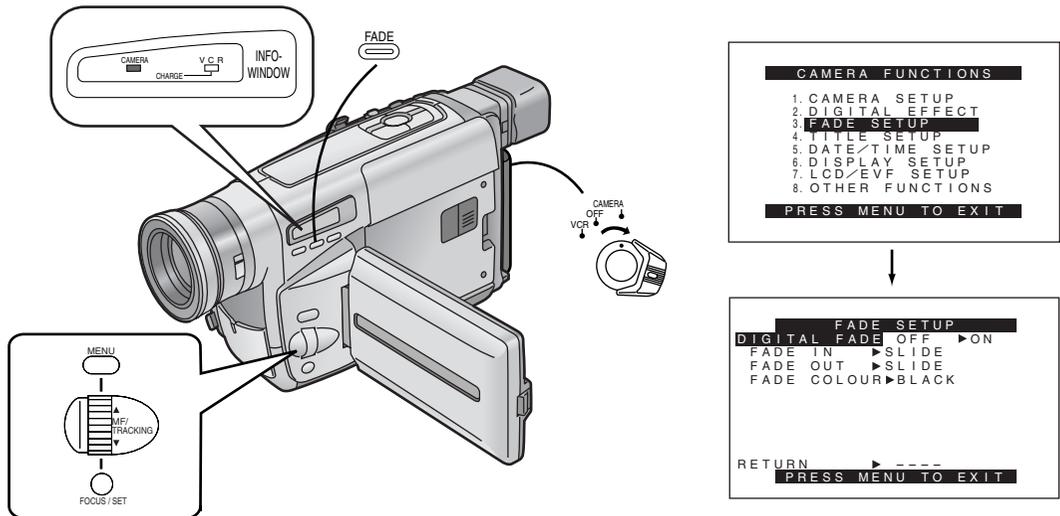


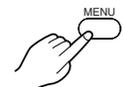
- When using the Digital Zoom Function, the picture quality is somewhat reduced.

**7**  
Push the [W/T] Zoom Lever toward [T] or [W] to zoom in or out as desired.



**Cancelling the Digital Zoom Function**  
Set [DIGITAL EFFECT] on the [DIGITAL EFFECT] Sub-Menu to [OFF].



Title	Procedure	
<p><b>Using the Fade Functions</b></p> <p>■ <b>Fading In</b> Fading in lets you make the picture (and sound) appear gradually at the beginning of a recording.</p> <p>■ <b>Fading Out</b> Fading out lets you make the picture (and sound) disappear gradually at the end of a recording.</p>	<p><b>1</b> After displaying the [FADE SETUP] Sub-Menu... (p. 10) Turn the [▲▼] Dial to select [DIGITAL FADE] and then press the [SET] Button to select [ON].</p> 	<p><b>2</b> Turn the [▲▼] Dial to select [FADE IN] and then press the [SET] Button to select the desired the fade in effect.</p> 
<p><b>1</b> </p> <p><b>2</b> </p> <p><b>3</b> </p> <p><b>4</b> </p>	<p><b>5</b> Turn the [▲▼] Dial to select [FADE COLOUR] and then press the [SET] Button to select the desired colour.</p> 	<p><b>6</b> Press the [MENU] Button to exit the Menu.</p> 
<p><b>5</b> </p>	<p><b>9</b> Approximately 3–4 seconds later, release the [FADE] Button. The picture appears gradually with the selected digital fade effect.</p> 	<p><b>10</b> During recording, keep the [FADE] Button pressed. The picture disappears gradually with the selected digital fade effect.</p> 

## Normal Fading In/Out

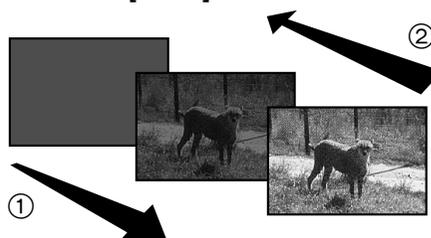
The whole picture fades in or fades out gradually.

### ■ Fading In ①

- 1 Set [DIGITAL FADE] on the [FADE SETUP] Sub-Menu to [OFF]. (p. 10)
- 2 With the Movie Camera in the Recording Pause Mode, keep the [FADE] Button pressed.
- 3 When the picture has completely disappeared, press the Recording Start/Stop Button to start recording.
- 4 Approximately 3–4 seconds later, release the [FADE] Button.

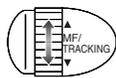
### ■ Fading Out ②

- 1 Set [DIGITAL FADE] on the [FADE SETUP] Sub-Menu to [OFF].
- 2 During recording, keep the [FADE] Button pressed.
- 3 After the picture has completely disappeared, press the Recording Start/Stop Button to stop recording.
- 4 Release the [FADE] Button.



# 3

Turn the [▲▼] Dial to select [FADE OUT].



# 4

Press the [SET] Button to select the desired the fade out effect.



# 7

With the Movie Camera in the Recording Pause Mode, keep the [FADE] Button pressed.

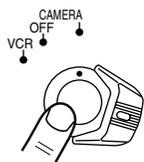


# 8

When the picture has completely disappeared, press the Recording Start/Stop Button to start recording.

# 11

After the picture has completely disappeared, press the Recording Start/Stop Button to stop recording.



# 12

Release the [FADE] Button.

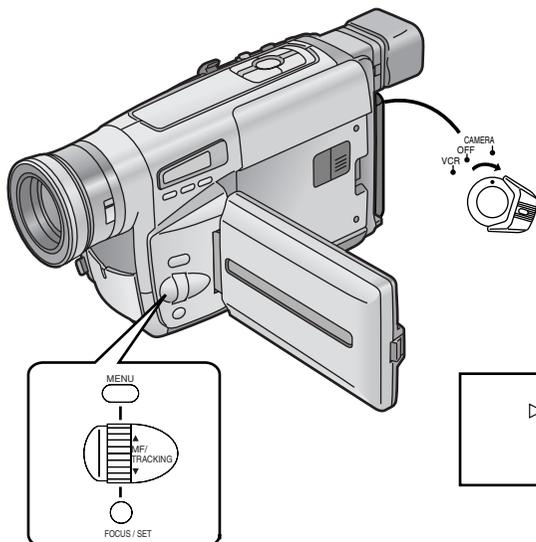


## Remarks, etc.

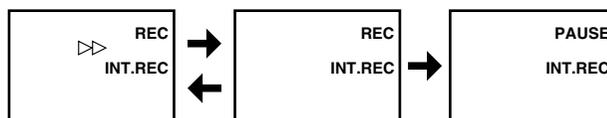
- 1 **Slide Mode [SLIDE]**  
The picture fades in with a wipe effect or fades out.
- 2 **Door Mode [DOOR]**  
The picture fades in to the left and right like a door opens or fades out in reverse direction.
- 3 **Corner Mode [CORNER]**  
The picture fades in from the upper right to the lower left corner or fades out in reverse direction.
- 4 **Window Mode [WINDOW]**  
The picture fades in starting at the centre and extending toward the edges or fades out in reverse direction.
- 5 **Shutter Mode [SHUTTER]**  
The picture fades in vertically from the center like a shutter or fades out in reverse direction.

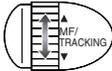
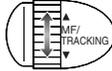
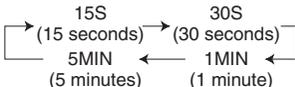
- The colours of the Digital Fade change in the following order:





OTHER FUNCTIONS	
REC SPEED	▶ SP
<b>INTERVAL REC</b>	OFF ▶ ON
REC TIME	▶ 5S
INTERVAL TIME	▶ 15S
DEMO MODE	▶ OFF
RETURN	▶ ---
PRESS MENU TO EXIT	



Title	Procedure		
<p><b>Interval Recording</b></p> <p>You can record sequentially at preset time spans. Leaving the Movie Camera aimed at a specific subject, you can record subtle changes over an extended period of time.</p> <ul style="list-style-type: none"> <li>It is not possible to perform interval recording onto recordings made in the LP Mode. (p. 13)</li> </ul>	<p><b>1</b></p> <p>After displaying the [OTHER FUNCTIONS] Sub-Menu... (p. 10) Turn the [▲▼] Dial to select [INTERVAL REC].</p> 	<p><b>2</b></p> <p>Press the [SET] Button to select [ON].</p> 	
	<p><b>5</b></p> <p>Turn the [▲▼] Dial to select [INTERVAL TIME].</p> 	<p><b>6</b></p> <p>Press the [SET] Button to select the desired Interval Time.</p> 	
			

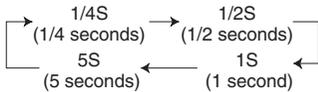
# 3

Turn the [▲▼] Dial to select [REC TIME].



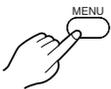
# 4

Press the [SET] Button to select the desired Recording Time.



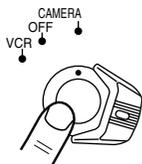
# 7

Press the [MENU] Button to exit the Menu. The [INT.REC] Indication appears.



# 8

Press the Recording Start/Stop Button. Recording and intervals alternate automatically.

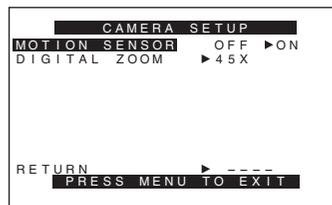
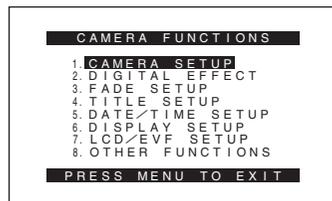
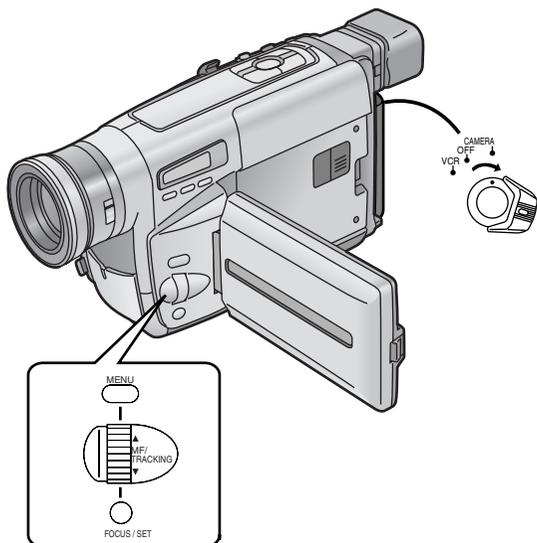


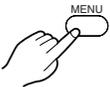
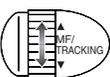
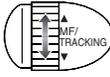
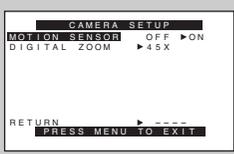
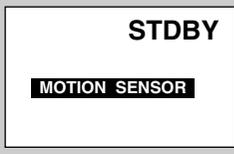
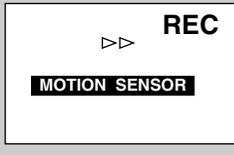
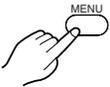
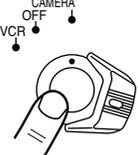
## Remarks, etc.

### Cancelling the Interval Recording Mode

When the [▷▷] Indication is not displayed, press the Recording Start/Stop Button to make the [PAUSE] Indication appear. And then set [INTERVAL REC] on the [OTHER FUNCTIONS] Sub-Menu to [OFF].

- Before performing other operations following Interval Recording, make sure the Interval Recording Mode is deactivated.
- The Interval Recording Mode is cancelled when the Movie Camera is turned off.



Title	Procedure	
<p><b>Motion-Sensor-Controlled Recording</b></p> <p>In this mode, recording automatically starts when the built-in Motion Sensor detects some movement in the picture.</p> <ul style="list-style-type: none"> <li>•Select the desired Date/Time/Title Indications before activating the Motion-Sensor Mode. (p. 24)</li> </ul>	<p><b>1</b></p> <p>Select the [CAMERA SETUP] on the [CAMERA FUNCTIONS] Main-Menu. (p. 10)</p>   	<p><b>2</b></p> <p>Turn the [▲▼] Dial to select [MOTION SENSOR].</p> 
 <p>↓</p>  <p>↓</p> 	<p><b>Cancelling the Motion Sensor Function During Stand-by Mode</b></p> <p>Set [MOTION SENSOR] on the [CAMERA SETUP] Sub-Menu to [OFF].</p>   	<p><b>Cancelling the Motion Sensor Function During Recording</b></p> <p>Press the Recording Start/Stop Button for approximately 2 seconds.</p> 

# 3

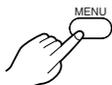
Press the [SET] Button to select [ON].



# 4

Press the [MENU] Button to exit the Menu.

The [STDBY] Indication appears.



- Approximately 1 second after the Movie Camera's Motion Sensor has detected movement in the picture, recording automatically starts. Approximately 10 seconds after movement in the picture has stopped, recording automatically stops and the Movie Camera is in the Motion Sensor Function Stand-by Mode.

- When the Movie Camera remains in the Motion Sensor Function Stand-by Mode for more than 6 minutes, the Viewfinder or \*LCD Monitor turns off to conserve power. When the Motion Sensor again detects movement in the picture, recording automatically restarts after approximately 4 seconds, and the Viewfinder or \*LCD Monitor turns on.

\*LCD Monitor: **NV-VZ14/VZ15 only**

## Remarks, etc.

### In the Following Recording Situations, the Motion Sensor May Not Work Correctly:

- A white wall or another single-colour background behind the subject.
- A subject with horizontal, vertical or oblique stripes.
- Sudden changes in the surrounding brightness.
- Exposure of the Movie Camera to slight shocks or vibration.
- Extremely slow or fast movement of the subject.
- Very little movement of the subject.
- Recording in a dimly lit place. (The [MOTION SENSOR] Indication flashes.)
- A very small subject.
- Movement of the subject near the edge of the picture.
- A background with horizontal or vertical stripes.

- To prevent accidental recording start caused by Movie Camera movement, the Movie Camera should be mounted on a tripod or be otherwise secured in a very stable position.

- Although you can select a Digital Effect on the [DIGITAL EFFECT] Sub-Menu when [MOTION SENSOR] on the [CAMERA SETUP] Sub-Menu is set to [ON], the Motion Sensor Function has priority and the selected digital effect is automatically cancelled.

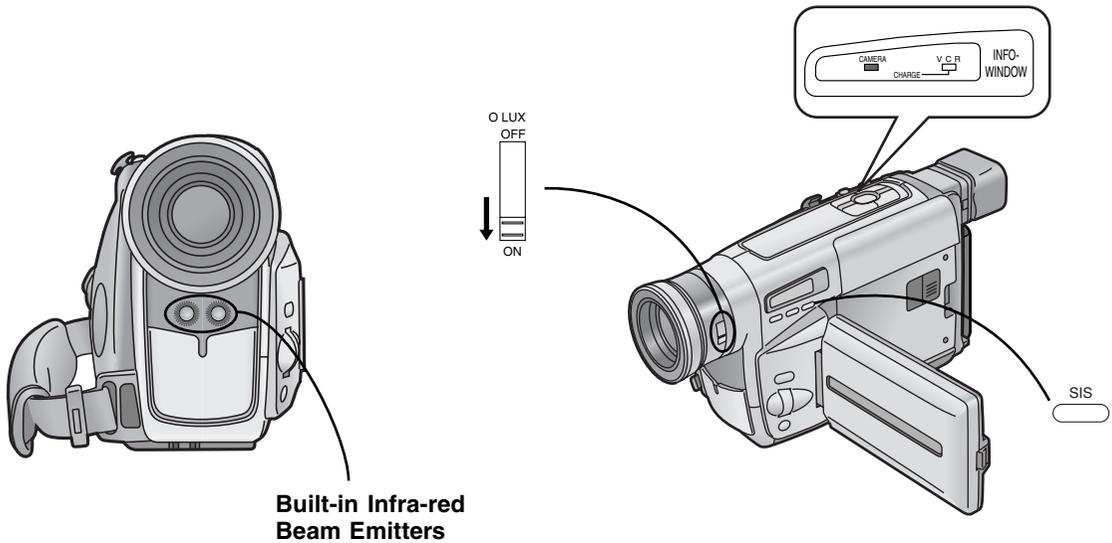
- When [MOTION SENSOR] on the [CAMERA SETUP] Sub-Menu is set to [ON], it is not possible to manually start recording by pressing the Recording Start/Stop Button or to activate the Recording Check or Camera Search Function.

- When you use the AC adaptor to power the Movie Camera, the Motion Sensor Function Stand-by Mode will continue when no movement is detected in the picture, even when the tape has reached the end during recording.

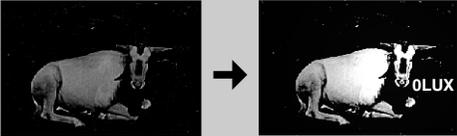
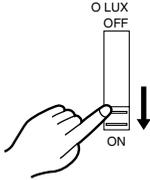
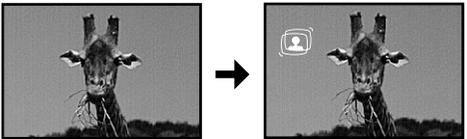
- To ensure correct functioning of the Motion Sensor Function, the moving subject should be quite large in the picture. Therefore, when you have zoomed the lens to the maximum wide-angle position, the distance between lens and subject should preferably be within about 2 metres. For subjects at larger distances, be sure to zoom in accordingly.

- The Movie Camera requires time to set up before recording starts. Therefore, the beginning of movement is not recorded.

- If there is a power interruption, the Motion Sensor Function is cancelled.

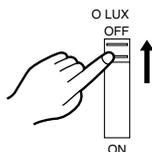


**Built-in Infra-red Beam Emitters**

Title	Procedure
<p><b>Recording in Dark Places without Any Illumination</b> (0 Lux Night View Function)</p> <p>This function is convenient when you want to record at night in places without any illumination, for example for observing the behaviour of nocturnal animals, etc. In this mode, the Movie Camera emits infrared rays which makes it possible to record subjects that are invisible to the naked eye.</p> 	<p><b>1</b> Set the [0 LUX OFF/ON] Switch to [ON] to make the [0LUX] Indication appear. The built-in Infra-red Beam Emitters light. Be careful not to cover them with your hand when recording.</p> 
<p><b>Recording with Minimised Camera Shake</b> (Super Image Stabilizer)</p> <p>In recording situations where shaking of the Movie Camera is likely to happen, for example when you have zoomed in on a distant subject or when you record while walking, you can use this function to stabilize the image.</p> <ul style="list-style-type: none"> <li>• In case of very strong camera shake, it may not be possible to stabilize the picture.</li> </ul>	<p><b>1</b> Press the Super Image Stabilizer Button [SIS]. The [ ] Indication appears.</p>  

**Remarks, etc.****Cancelling the 0 Lux Night View Function**

Set the [0 LUX OFF/ON] Switch to [OFF] to make the [0LUX] Indication disappear.

**Cancelling the Super Image Stabilizer Function**

Press the [SIS] Button again.

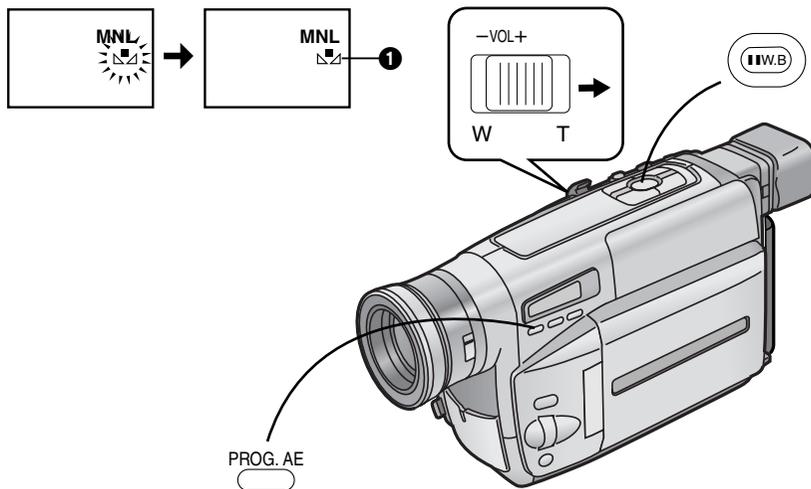


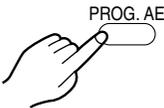
■ **In the Following Recording Conditions, the Picture Stabilizing Effect May Not Be Sufficient:**

- Subjects with horizontal or vertical stripes
- Flat subjects
- Dark subjects (In this case, the [ ] Indication flashes. Increase the amount of light.)
- Subject under many fluorescent lamps.

**Notes for Recording in Dark Places without Any Illumination**

- Do not use the 0 Lux Night View Function in brightly lit places and never aim the Movie Camera against the sun, as this could cause irreparable damage.
- The playback picture of scenes recorded with the 0 Lux Night View Function will be in black and white.
- If you change the setting of the [0 LUX OFF/ON] Switch during recording, a switching noise is also recorded.
- When recording in the 0 Lux Night View Function, it is not possible to adjust the white balance manually or to cancel the manually adjusted white balance setting.
- It is not possible to use any of the Programme AE Modes when the 0 Lux Night View Mode is activated.
- When using the 0 Lux Night View Function, the subject should be within 3 metres from the Movie Camera.
- When the automatic focusing is not precise, adjust the focus manually.
- As the iris is fully opened in the 0 Lux Night View Mode, subjects in white or other light colours may be recorded whitish, blurred and with weak contrast.
- If you use the 0 Lux Night View Function together with the Motion-Sensor-Controlled Recording Function, recording starts automatically when the Movie Camera's built-in Motion Sensor detects some movement in the picture. This combined function is convenient for easy, unattended animal observation recordings at night.



Title	Procedure	
<p><b>Recording with Automatic White Balance Adjustment</b></p> <p>After pressing the [PROG. AE] Button so that the [AUTO] Indication appears, it is possible to record pictures with natural colours under almost any recording condition.</p>	<p><b>1</b> Press the [PROG. AE] Button repeatedly until the [AUTO] Indication appears.</p> 	
<p><b>Recording with Manual White Balance Adjustment</b></p> <p>With this Movie Camera, you can also adjust the white balance manually. Use this mode for special subjects and recording conditions, for which the Full Auto Mode is not suitable, and for light sources outside the Auto White Balance Adjustment range (p. 69). Use it also when you want to manually adjust the white balance for each new scene as professionals do.</p>	<p><b>1</b> Press the [PROG. AE] Button repeatedly until an indication other than [AUTO] Indication appears.</p> 	<p><b>2</b> Attach the White Lens Cap and zoom in until the entire screen is white.</p> 

### 3

Keep the [W.B] Button pressed until the [ ] Indication ① stops flashing and remains lit.



#### Returning to the Auto White Balance Adjustment Mode

Press the [W.B] Button once. Or, press the [PROG. AE] Button repeatedly until the [AUTO] Indication appears.



#### Remarks, etc.

##### In the following cases, you cannot change White Balance:

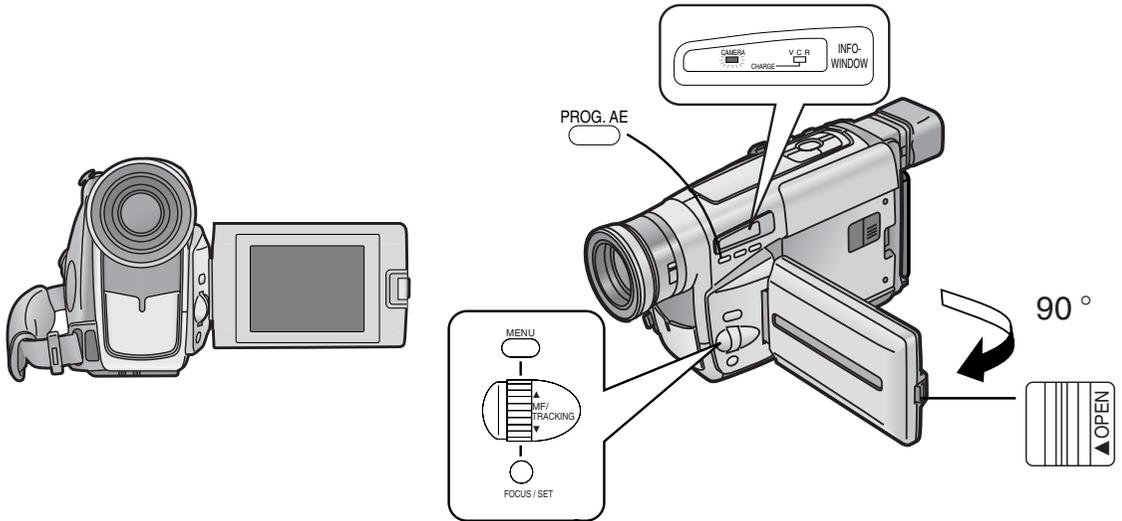
- When you set [DIGITAL EFFECT] on the [DIGITAL EFFECT] Sub-Menu to [B/W], [SEPIA], [RED FILTER] or [BLUE FILTER]
- During 0 Lux Night View Mode

##### In the Following Cases, the [ ] Indication Flashes:

- During manual adjustment of the white balance. (If the surroundings are dark and the white balance cannot be adjusted, the [ ] Indication keeps flashing.)
- When the previously Manual White Balance Adjustment is maintained.
- We recommend that you adjust the white balance anew whenever there is a change in the recording situation.

##### Subjects and Recording Conditions Not Suitable for Recording in the Full Auto Mode

- Subjects with dark surfaces
- Subjects lit by natrium lamps



Title	Procedure	
<p><b>Recording Yourself</b> (Recording with the LCD Monitor Facing Forward) (NV-VZ14/VZ15 only)</p> <p>Turning the LCD Monitor so that it faces forward, allows you to aim the Movie Camera and view the picture in the Viewfinder, while the persons in front of the camera can check the picture on the LCD Monitor during recording. If you mount the Movie Camera on a tripod and use the *Remote Controller, you can also take part in the action that you are recording and check the picture from the front on the LCD Monitor. *Remote Controller: <b>NV-VZ15 only</b></p>	<p><b>1</b> Slide the [▲ OPEN] Lever to the left and simultaneously open the LCD Monitor in the direction of the arrow approximately 90°.</p>	<p><b>2</b> After displaying the Camera Mode Main-Menu... (p. 10) Turn the [▲▼] Dial to select the [DISPLAY SETUP] Sub-Menu and then press the [SET] Button.</p>
<p><b>Focusing on the Subject Manually</b> (Manual Focus)</p> <p>This makes it possible to adjust the focus manually for subjects and recording situations for which automatic focusing is not precise.</p>	<p><b>1</b> Press the [PROG. AE] Button repeatedly until an indication other than [AUTO] Indication appears.</p>	<p><b>2</b> Keep the [W/T] Zoom Lever pushed toward [T] to zoom in on the subject. Zooming in on the subject before adjusting the focus ensures that the subject remains precisely focused even when you later zoom out.</p>

## ■ Mirror Mode

When recording yourself with the LCD Monitor facing forward, the picture shown on it the way it is being recorded may be difficult to get used to.

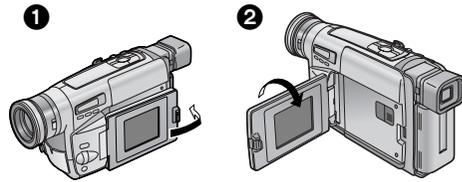
This is because we usually look at ourselves in the mirror, so we see a mirror-image and this feels more natural. This Movie Camera features the Mirror Mode which displays the picture as a mirror-image.

However, even if you have selected in the Mirror Mode, the picture is recorded in the normal way.

- It is not possible to display and record the Date, Time and/or Title Indication in the Mirror Mode.

**In the Mirror Mode, only the following indications can be displayed on the LCD Monitor and in the Viewfinder:**

- : Recording Mode Indication
- : Recording Pause Mode Indication
- ▬ : Remaining Battery Indication
- ⚠ : General Warning/Alarm Indication

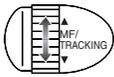


When you want to confirm other indications, return the LCD Monitor to position ① or ② shown in the illustration above. Especially when the ⚠ Indication is displayed, be sure to return the LCD Monitor to position ① or ② so that you can confirm the actual Warning/Alarm Indication.

- If you turn the LCD Monitor so that it faces forward, the Viewfinder also automatically turns on. However, in the following cases, the Viewfinder turns off:
  - Changing from the Camera to the VCR Mode.
  - Closing the LCD Monitor with the screen facing outward (as shown above ①).

# 3

Turn the [▲▼] Dial to select [SELF SHOOT].



# 4

Press the [SET] Button to select the desired mode ([NORMAL] or [MIRROR]).

[NORMAL] means Normal Mode.  
[MIRROR] means Mirror Mode.



# 7

Press the Recording Start/Stop Button ①.



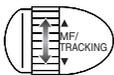
■ **Stopping Recording**  
Press the Recording Start/Stop Button ①.

## Remarks, etc.

# 3

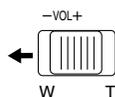
Turn the [MF] Dial to adjust the focus.

The [MF] Indication appears. ([MF] means Manual Focus.)



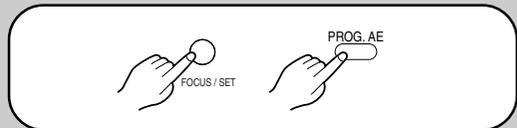
# 4

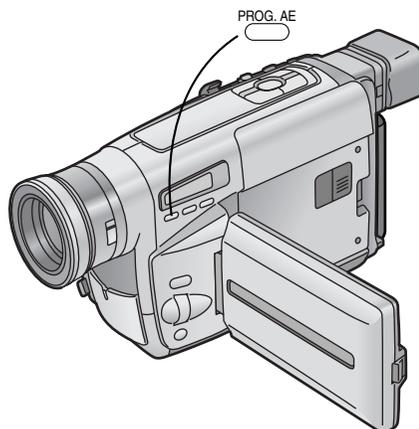
Push the [W/T] Zoom Lever toward [W] to zoom out as desired.

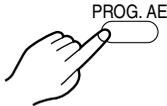


## ■ Cancelling the Manual Focusing Mode

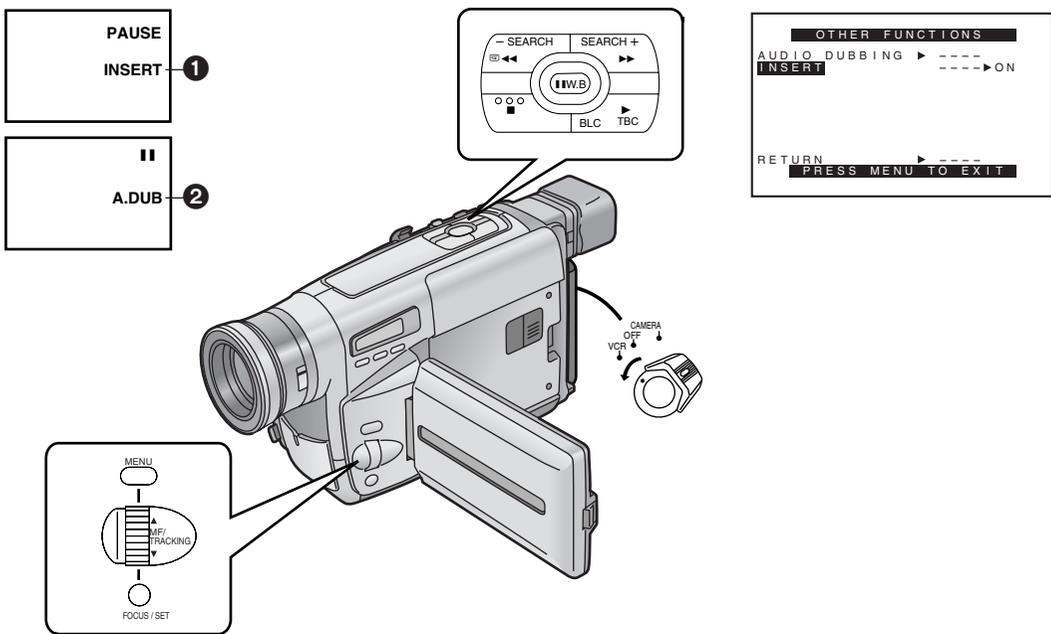
Press the [FOCUS] Button once to make the [MF] Indication disappear. Or, press the [PROG. AE] Button repeatedly until the [AUTO] Indication appears.

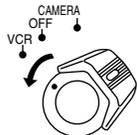
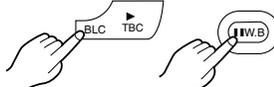


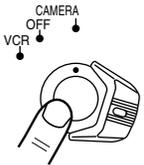
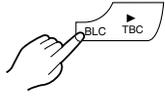


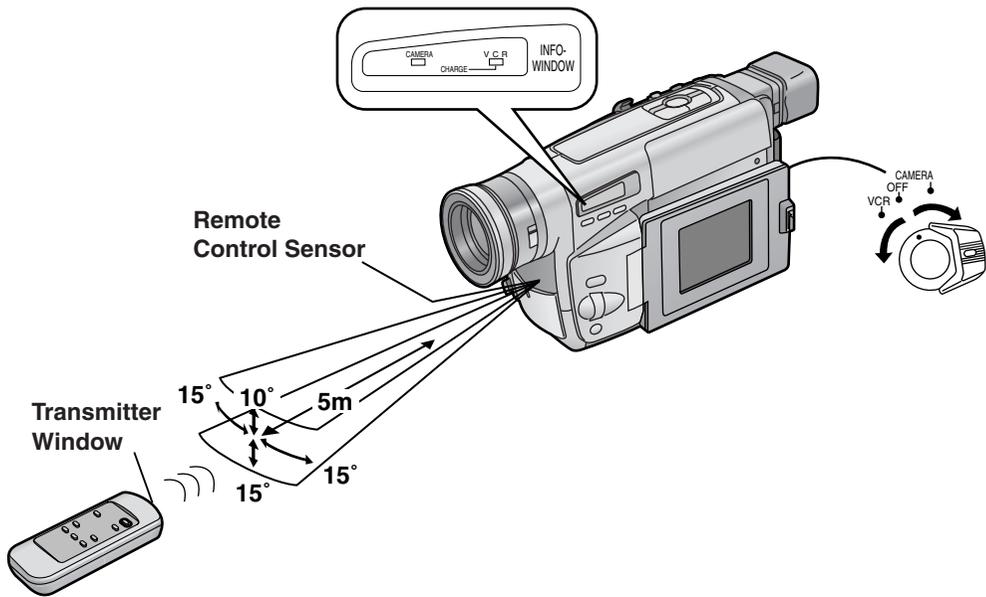
Title	Procedure
<p><b>Recording in Special Situations (Programme AE)</b></p> <p>This function lets you select Automatic Exposure settings optimized for special recording situations.</p> <div style="display: flex; flex-wrap: wrap; gap: 10px;">      </div>	<p><b>1</b></p> <p>Press the [PROG. AE] Button repeatedly until the indication of the desired mode ([, [, [] or [ <div style="text-align: center;">  </div> <p><b>[] Sports Mode</b> To record scenes with fast-moving subjects such as sports scenes.</p> <p><b>[] Portrait Mode</b> To make subjects stand out sharply from the background.</p> <p><b>[] Low Light Mode</b> To record dark scenes more brightly.</p> <p><b>[] Spotlight Mode</b> To record subjects under spotlights. (party, theatre, etc.)</p> <p><b>[] Surf &amp; Snow Mode</b> To record subjects in brightly lit surroundings (ski slopes, beach, etc.).</p> </p>

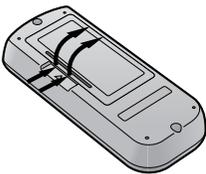
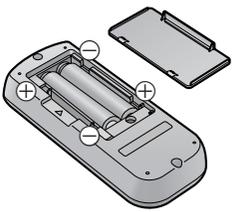
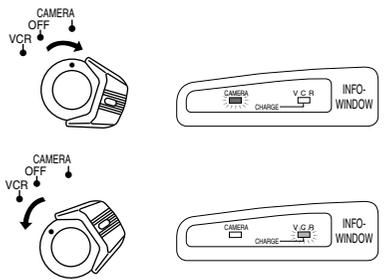
	<b>Remarks, etc.</b>
<p><b>Cancelling the Selected Programme AE Function</b> Press the [PROG. AE] Button to set to [AUTO].</p>	<ul style="list-style-type: none"> <li>• During recording, it is not possible to change the recording mode ([AUTO], [MNL], [  ], [  ], [  ], [  ], [  ]), even if you press the [PROG. AE] Button.</li> <li>• It is not possible to use any of the Programme AE Modes when the 0 Lux Night View Mode is activated.</li> </ul> <p><b>Sports Mode</b></p> <ul style="list-style-type: none"> <li>• When playing back scenes recorded in the Sports Mode, you can enjoy slow motion and still playback of very sharp images with fine details.</li> <li>• Avoid recording under fluorescent, mercury-vapour or sodium lamps as the colour and the brightness of the playback picture may fluctuate.</li> <li>• When recording subjects lit by strong lights or with much light reflection, the playback picture may contain vertical streaks of light.</li> <li>• When the scene is not sufficiently lit, the [  ] Indication flashes.</li> <li>• When using this mode for recording indoors, the playback picture may flicker.</li> </ul>
	<p><b>Portrait Mode</b></p> <ul style="list-style-type: none"> <li>• When using this mode for recording indoors, the playback picture may flicker.</li> </ul> <p><b>Low Light Mode</b></p> <ul style="list-style-type: none"> <li>• It may not be possible to sufficiently brighten up extremely dark scenes.</li> <li>• The use of this mode for recording may cause noise in the playback picture.</li> </ul> <p><b>Spotlight Mode</b></p> <ul style="list-style-type: none"> <li>• When using this mode, the recorded picture may be extremely dark.</li> <li>• If a subject is extremely bright, the recorded picture may be whitish.</li> </ul> <p><b>Surf &amp; Snow Mode</b></p> <ul style="list-style-type: none"> <li>• If a subject is extremely bright, the recorded picture may be whitish.</li> </ul>



Title	Procedure	
<p><b>Insert Editing</b></p> <p>You can record a new scene onto a previously recorded tape, replacing a section of the original recording with minimal picture distortion at the in- and out-points. The original audio remains unchanged.</p>	<p><b>1</b> Insert the recorded cassette and set the [CAMERA/OFF/VCR] Switch to [VCR].</p> 	<p><b>2</b> Press the [▶] Button to start playback and press the Pause Button [  ] at the tape position at which you want the editing to stop.</p> 
	<p><b>5</b> Play back a still picture at the point at which you want the Insert Editing to start.</p>	<p><b>6</b> Set [INSERT] on the [OTHER FUNCTIONS] Sub-Menu to [ON]. The [INSERT] Indication ① appears.</p>
<p><b>Adding New Sound on a Recorded Cassette (Audio Dubbing)</b></p> <p>You can record a new music or narration onto a previously recorded tape, replacing a section of the original audio.</p> <p>Perform above steps 1-4 before performing the following steps.</p>	<p><b>1</b> Play back a still picture at the point at which you want the audio dubbing to start.</p>	<p><b>2</b> Set [AUDIO DUBBING] on the [OTHER FUNCTIONS] Sub-Menu to [ON]. The [A.DUB] Indication ② appears.</p>

		<i>Remarks, etc.</i>
<p><b>3</b> Reset the Tape Counter to zero. (p. 60)</p>	<p><b>4</b> After displaying the [DISPLAY SETUP] Sub-Menu... (p. 10) Set [DISPLAY] on the [DISPLAY SETUP] Sub-Menu to [MEMORY].</p> 	<ul style="list-style-type: none"> <li>• Be sure to insert the cassette with an intact tab or if the tab has been removed, cover the hole with an adhesive tape.</li> </ul> <p><b>Stopping Insert Editing</b> Press the Recording Start/Stop Button. The Movie Camera is again in the Recording Pause Mode.</p> <p><b>Cancelling the Insert Editing Function</b> Press the [■] Button.</p> <ul style="list-style-type: none"> <li>• It is not possible to set [INSERT] on the [OTHER FUNCTIONS] Sub-Menu to [ON] when it is not in the Still Playback Mode.</li> <li>• It is not possible to perform Insert Editing on an unrecorded part of the tape. If you try to do so, the tape will stop.</li> <li>• When pressing the [MENU] Button in the Recording Pause Mode, the Menu of Camera Mode appears. However, you cannot use the [MOTION SENSOR] of the [CAMERA SETUP] Sub-Menu, [REC SPEED] and [INTERVAL REC] of the [OTHER FUNCTIONS] Sub-Menu.</li> </ul>
<p><b>7</b> Turn the Movie Camera to the title to be inserted and press the Recording Start/Stop Button. The Insert Editing automatically stops approximately at the position at which you reset the counter to zero.</p> 	<p><b>3</b> Press the Playback Button [▶] to start audio dubbing. The Audio Dubbing automatically stops approximately at the position at which you reset the counter to zero.</p> 	<p><b>Stopping Audio Dubbing</b> Press the [■] Button. The Movie Camera is again in the Still Playback Mode.</p> <p><b>Cancelling the Audio Dubbing Function</b> Press the [■] Button.</p> <ul style="list-style-type: none"> <li>• It is not possible to set [AUDIO DUBBING] on the [OTHER FUNCTIONS] Sub-Menu to [ON] when it is not in the Still Playback Mode.</li> <li>• It is not possible to perform Audio Dubbing on an unrecorded part of the tape. If you try to do so, the tape will stop.</li> <li>• When using the Audio Dubbing Function, the picture quality is somewhat reduced. However, it doesn't affect the recorded picture.</li> </ul>



Title	Procedure	
<p><b>Remote Controller</b> (NV-VZ15/RZ15 only)</p> <p>Using the wireless Remote Controller supplied with the Movie Camera allows operating most of the Movie Camera's major functions from a distance.</p> <p><b>Inserting the Batteries</b> Insert the supplied batteries before using the Remote Controller.</p>	<p><b>1</b> Remove off the Battery Cover.</p> 	<p><b>2</b> Insert the batteries with the polarity (+ and -) correctly aligned.</p> 
<p><b>Using the Remote Controller</b></p>	<p><b>1</b> Set the [CAMERA/OFF/VCR] Switch on the Movie Camera to [CAMERA] or [VCR].</p> <ul style="list-style-type: none"> <li>•When the [CAMERA] Lamp lights, you can use the recording functions.</li> <li>•When the [VCR] Lamp lights, you can use the playback functions.</li> </ul> 	

The Remote Controller lets you take part in the action and control the recording operation from in front of the Movie Camera.

### ■ Buttons on the Remote Controller

The buttons with the same mark as on the Movie Camera generally have the same function.

#### 1 Zoom Buttons [W/T] (p. 24, 47)

#### 2 Rewind/Review Button [◀◀]

To start review playback. (p. 28)

To rewind the tape. (p. 26)

To activate the Camera Search Function.

(p. 22)

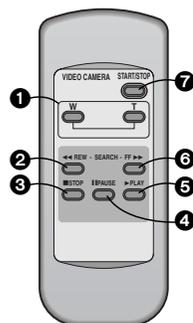
To activate the Recording Check Function.

(p. 22)

#### 3 Stop Button [■] (p. 27)

#### 4 Pause Button [||] (p. 29)

#### 5 Playback Button [▶] (p. 27)



#### 6 Fast-Forward/Cue Button [▶▶]

To start cue playback. (p. 28)

To fast-forward the tape.

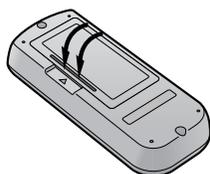
To activate the Camera Search Function.

(p. 22)

#### 7 Recording Start/Stop [START/STOP] (p. 20)

## 3

### Replace the Battery Cover.



### Replacing the Batteries

The life of the batteries is about 1 year.

When the batteries are exhausted, purchase two new "AAA", "UM-4" or "R03" type batteries and insert them in the same way as explained on the left.

### Remarks, etc.

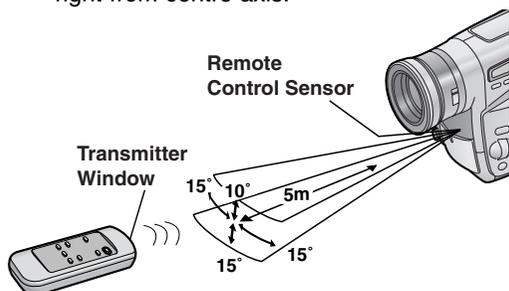
- Do not mix old batteries with new batteries.
- Do not mix different battery types, i.e. Alkaline and Manganese.
- Do not use rechargeable (Ni-Cd) batteries.
- Do not short-circuit the batteries.
- When you do not use the Remote Controller for a long time, take out the batteries and store it in a cool, dry place.

## 2

### Aim the Remote Controller at the Remote Control Sensor on the Movie Camera and press the appropriate button.

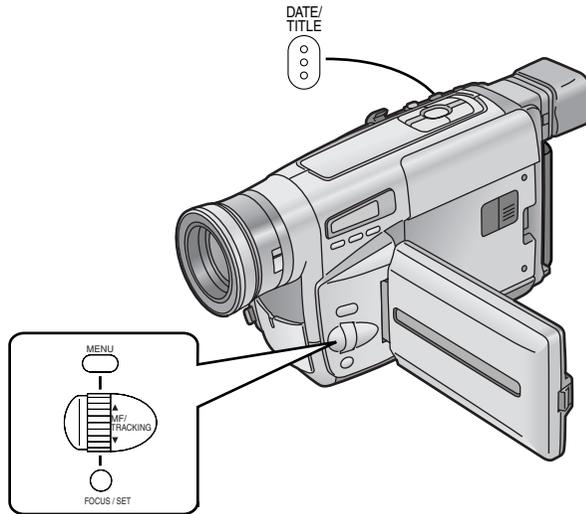
Distance to the Movie Camera: Less than 5 metres.

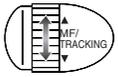
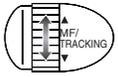
Angle: Approximately 10° up, and 15° down, left and right from centre axis.

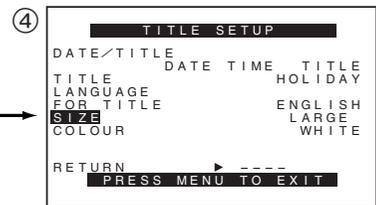
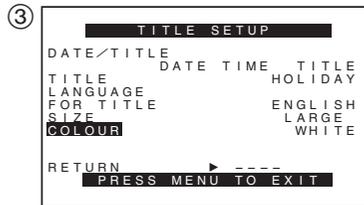
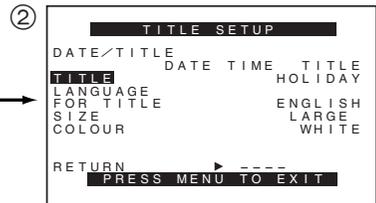
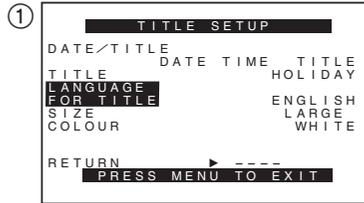
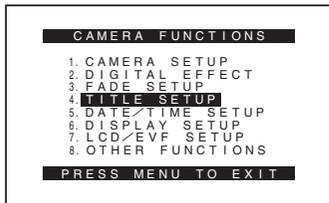


- The operative range described on the left is valid for using the Remote Controller indoors. When using it outdoors or under strong lights, it may not work correctly even within the left range.
- Within a distance of about 1 metre, it is also possible to use the Remote Controller from the side ([MENU] Button side). (NV-VZ15 only)
- Do not cover the Transmitter Window on the Remote Controller with your hand, etc.
- The zoom speed cannot be changed from the Remote Controller.

To prevent inadvertent operation by other infrared remote controllers, the Movie Camera needs to receive each command signal three times. For this reason, there is a slight delay between pressing the [W] or [T] Button on the Remote Controller and the actual operation of the zoom function on the Movie Camera.



Title	Procedure	
<p><b>Recording with Pre-programmed Titles Inserted in the Picture</b></p> <p>You can insert one of 10 pre-programmed titles in recordings of special occasions such as weddings and birthday parties. These titles are available in 8 languages.</p> <ul style="list-style-type: none"> <li>• Be sure to turn the Movie Camera off before removing the Battery or disconnecting the AC Adaptor. Disconnecting the power supply while the Movie Camera is on erases the Date/Time/Title Indication stored in memory.</li> </ul>	<p><b>1</b></p> <p>After selecting [LANGUAGE FOR TITLE] ① on the [TITLE SETUP] Sub-Menu... (p. 10) Press the [SET] Button to select the desired language.</p> 	<p><b>2</b></p> <p>Turn the [▲▼] Dial to select [TITLE] ②.</p> 
<p><b>Deleting the Pre-programmed Title Indication</b></p> <p>During recording or when the Movie Camera is in the Recording Pause Mode, press the [DATE/TITLE] Button to make the Title Indication disappear. To make it appear again, press the [DATE/TITLE] Button.</p> <p><b>Recording with Pre-programmed Title Inserted in the Picture</b></p> <p>During recording, press the [DATE/TITLE] Button to make the title appear.</p> <p><b>Deleting the Title</b></p> <p>Press the [DATE/TITLE] Button to make the title disappear.</p>	<p><b>5</b></p> <p>Press the [SET] Button repeatedly to select the desired colour.</p> 	<p><b>6</b></p> <p>Turn the [▲▼] Dial to select [SIZE] ④.</p> 



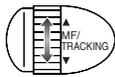
**3**

Press the [SET] Button repeatedly to select the desired title.



**4**

Turn the [▲▼] Dial to select [COLOUR] ③.



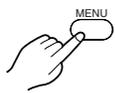
**7**

Press the [SET] Button to select the desired size ([NORMAL] or [LARGE]). You can choose either of 2 sizes for the title.



**8**

Press the [MENU] Button to exit the Menu.



**Remarks etc.**

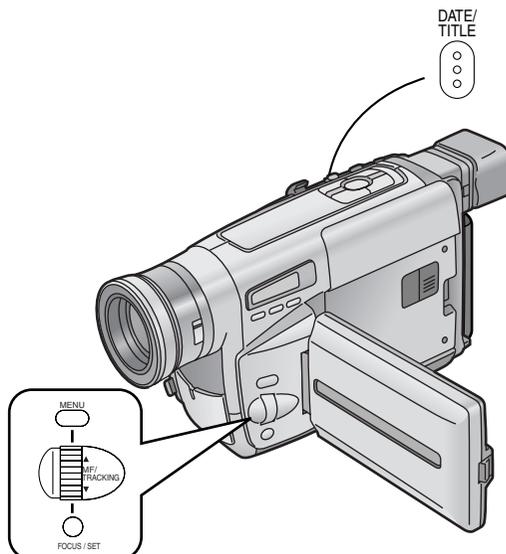
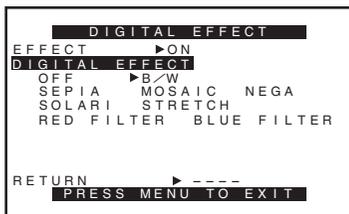
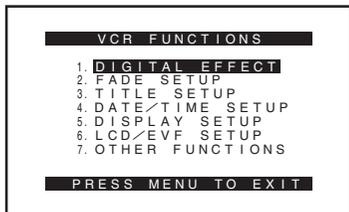
- Repeatedly pressing the [SET] Button changes the language of the title in the following order: [ENGLISH]→[GERMAN]→[FRENCH]→[ITALIAN]→[SPANISH]→[RUSSIAN]→[CHINESE]→[ARABIC]→[ENGLISH]→
- Repeatedly pressing of the [SET] Button changes the title in the following order: (In the other available languages, they are arranged in the same order.) [HOLIDAY]→[HAPPY BIRTHDAY]→[WEDDING]→[FAMILY]→[PARTY]→[THE END]→[CONGRATULATIONS]→[MERRY CHRISTMAS]→[HAPPY MEMORIES]→[HAPPY NEW YEAR]→[HOLIDAY]→
- You can select the colour of the title from among 8 colours.
- Repeatedly pressing the [SET] Button changes the colours of the title in the following order:

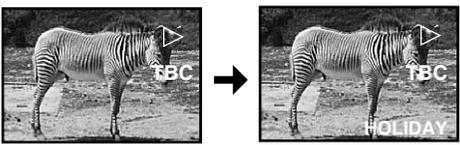
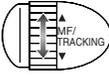


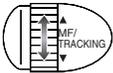
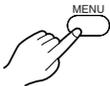
- When a large-size title is displayed, some indications do not appear even if the corresponding modes are activated.
- If you set [SIZE] on the [TITLE SETUP] Sub-Menu to [LARGE], the large [RECORD] and [PAUSE] Indications, which usually appear briefly when you start or stop recording, do not appear.
- When you change the title size from [NORMAL] to [LARGE], the Title Indication changes as shown below.

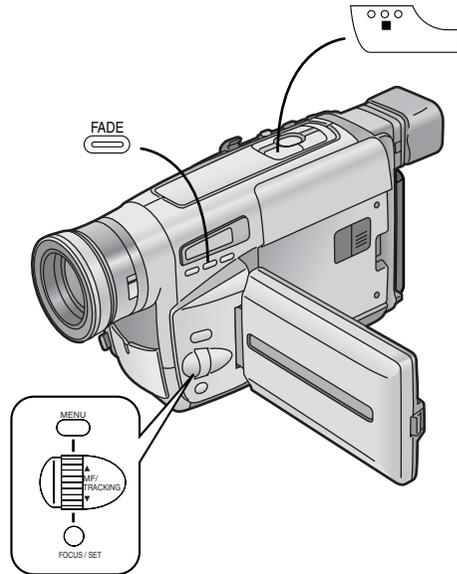
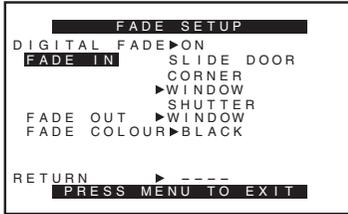
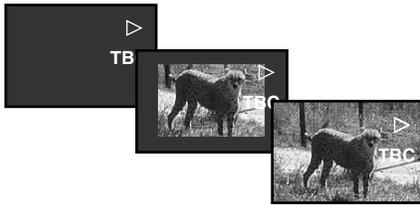


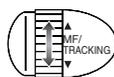
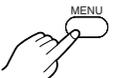
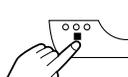
- The Date/Time/Title Indication remains displayed when you exit the [TITLE SETUP] Sub-Menu after having changed the language of the title, the type of Date/Time/Title Indication (p. 25), the title itself, the size of the title or the colour of the title.

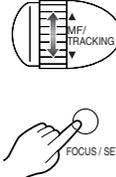
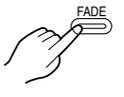


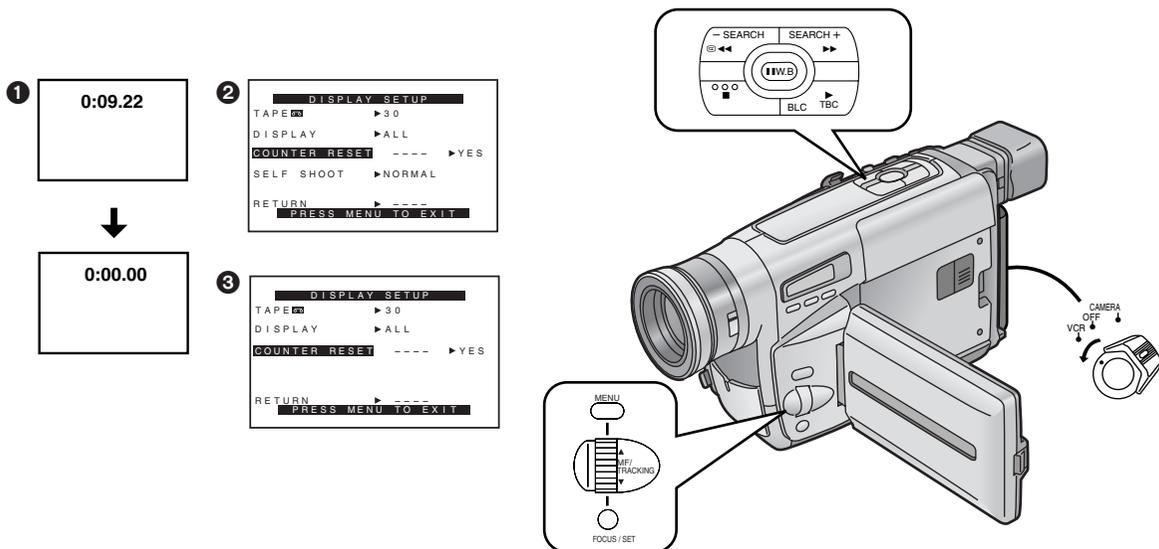
Title	Procedure									
<p><b>Using Various Functions during Playback</b></p> <p>With this Movie Camera you can add various effects to the recorded picture during playback. This is especially convenient for creatively enhancing certain scenes when you edit individual recorded scenes into a finished video.</p> <ol style="list-style-type: none"> <li>1. Playback Title Indication</li> <li>2. Playback Digital Effects</li> <li>3. Playback Digital Fade (p. 58)</li> </ol> <p>You can use these functions only when the TBC Function is activated. Make sure that the [TBC] Indication is displayed. (p. 27)</p>	<p><b>Playback Title Indication</b></p> <p>The Date/Time/Title Indication that can be inserted in the pictures during recording (p. 25, 54) can also be inserted in the picture during playback (editing). You can select the desired language, title, colour and size on the [TITLE SETUP] Sub-Menu. The Playback Title Indication Function can be used only when the TBC Function is activated. Make sure that the [TBC] Indication is displayed. (p. 27)</p> 									
<p><b>Playback Digital Effects</b></p> <p>There are various modes available for adding special digital picture effects to your recordings during playback. They are identical to the Digital Effects (p. 32) that can be used during recording. The Playback Digital Effect Function can be used only when the TBC Function is activated. Make sure that the [TBC] Indication is displayed. (p. 27)</p> <table border="0"> <tr> <td>① B/W</td> <td>② SEPIA</td> </tr> <tr> <td>③ MOSAIC</td> <td>④ NEGA</td> </tr> <tr> <td>⑤ SOLARI</td> <td>⑥ STRETCH</td> </tr> <tr> <td>⑦ RED FILTER</td> <td>⑧ BLUE FILTER</td> </tr> </table>	① B/W	② SEPIA	③ MOSAIC	④ NEGA	⑤ SOLARI	⑥ STRETCH	⑦ RED FILTER	⑧ BLUE FILTER	<p><b>1</b></p> <p>After displaying the [DIGITAL EFFECT] Sub-Menu... (p. 32) Turn the [▲▼] Dial to select [DIGITAL EFFECT].</p> 	<p><b>2</b></p> <p>Press the [SET] Button to select the desired digital effect.</p> 
① B/W	② SEPIA									
③ MOSAIC	④ NEGA									
⑤ SOLARI	⑥ STRETCH									
⑦ RED FILTER	⑧ BLUE FILTER									

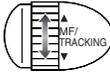
			<i>Remarks etc.</i>
<p><b>1</b>  <b>During playback, press the [DATE/TITLE] Button to superimpose the desired Date/Time/Title Indication.</b>                      To make the superimposed Date/Time/Title Indication disappear, press the [DATE/TITLE] Button again.                      The Date/Time Indication is generated by the Movie Camera's built-in clock.</p> <div style="text-align: center;">  </div>			<p><b>Suspending the Playback Digital Effect Temporarily</b>                      Set [EFFECT] on the [DIGITAL EFFECT] Sub-Menu to [OFF]. When the digital effect is temporarily suspended, the indication of the selected effect flashes.</p> <p><b>Cancelling the Playback Digital Effect</b>                      Set [DIGITAL EFFECT] on the [DIGITAL EFFECT] Sub-Menu to [OFF].</p> <ul style="list-style-type: none"> <li>• If you set the [CAMERA/OFF/VCR] Switch to [OFF] and then set it to [VCR] again, the previously selected Playback Digital Effect is automatically cancelled.</li> </ul>
<p><b>3</b>                      Turn the [▲▼] Dial to select [EFFECT].</p> <div style="text-align: center;">  </div>	<p><b>4</b>                      Press the [SET] Button to select [ON].</p> <div style="text-align: center;">  </div>	<p><b>5</b>                      Press the [MENU] Button to exit the Menu.</p> <div style="text-align: center;">  </div>	

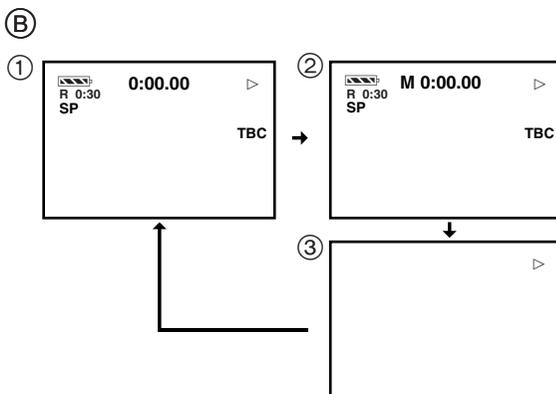
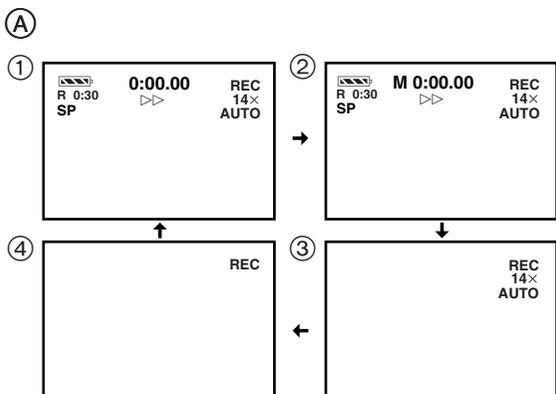


Title	Procedure	
<p><b>Playback Digital Fade</b></p> <p>There are various Playback Digital Fade Modes available. They are the same as the Digital Fade Modes that can be used for recording (p. 36). The Playback Digital Fade Modes can be used only when the TBC Function is activated. Make sure that the [TBC] Indication is displayed. (p. 27)</p>	<p><b>1</b></p> <p>Set [DIGITAL FADE] on the [FADE SETUP] Sub-Menu to [ON]. (p. 10)</p>  	<p><b>2</b></p> <p>Set [FADE IN] to the desired Digital Fade Mode.</p>  
	<p><b>5</b></p> <p>Press the [MENU] Button to exit the Menu.</p> 	<p><b>6</b></p> <p>During playback, keep the [FADE] Button pressed. The picture disappears gradually with the selected digital fade effect.</p> 
	<p><b>9</b></p> <p>After the picture has completely disappeared, press the [■] Button. Playback stops.</p> 	

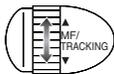
		<i>Remarks etc.</i>
<p><b>3</b> Set [FADE OUT] to the desired Digital Fade Mode.</p> 	<p><b>4</b> Set [FADE COLOUR] to the desired colour.</p> 	<ul style="list-style-type: none"> <li>•If you set the [CAMERA/OFF/VCR] Switch to [OFF] and then set it to [VCR] again, the previously selected Playback Digital Fade is automatically cancelled.</li> <li>•The colours of the Digital Fade change in the same order as Camera Mode. (p. 36)</li> </ul>
<p><b>7</b> Release the [FADE] Button at the point where you wish to fade in.</p> 	<p><b>8</b> During playback, press the [FADE] Button at the point where you want to fade out, and keep it pressed.</p> 	
<p><b>10</b> Release the [FADE] Button.</p> 		



Title	Procedure	
<p><b>Using the Tape Counter Indication</b></p> <p>The Tape Counter Indication is convenient for the following 2 purposes: to check the Elapsed Tape Time, and to use the Memory Stop Function.</p> <p><b>Checking the Elapsed Tape Time</b></p> <p>The Tape Counter Indication shows the elapsed tape time both during recording and playback. You can freely reset this indication (return the counter to [0:00.00] ❶). Therefore, by resetting the counter to zero when you start recording or playback, you can check the tape time that has elapsed from that point.</p>	<p><b>1</b></p> <p>After displaying the [DISPLAY SETUP] Sub-Menu... (p. 10) Turn the [▲▼] Dial to select [DISPLAY].</p> 	<p><b>2</b></p> <p>Press the [SET] Button to select [ALL].</p> 
<p><b>Using the Memory Stop Function</b></p> <p>This function is convenient for temporarily marking a tape position during recording or playback so that you can easily find it again later for playback.</p> <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 10px auto;">M 0:00.00</div>	<p><b>1</b></p> <p>Reset the Tape Counter to zero at the tape position from which you want to play back later.</p>	<p><b>2</b></p> <p>Set [DISPLAY] on the [DISPLAY SETUP] Sub-Menu of the [CAMERA FUNCTIONS] or the [VCR FUNCTIONS] Main-Menu to [MEMORY].</p>
		<p><b>3</b></p> <p>Start playback or recording.</p>



**3**  
Turn the [▲▼] Dial to select [COUNTER RESET].

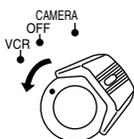


**4**  
Press the [SET] Button to select [YES].

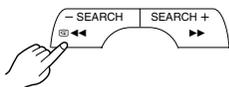
- When recording or playback starts, the elapsed tape time is indicated in hours, minutes and seconds. During playback of parts of the tape on which no recording has been made, this indication does not change.
- If you rewind the tape further than the tape counter position [0:00.00], the minus sign [-] appears in front of the Tape Counter Indication.

- ②: Camera Mode
- ③: VCR Mode

**4**  
After playback or recording is finished: Set the [CAMERA/OFF/VCR] Switch to [VCR].



**5**  
Press the [▶▶] or [◀◀] Button.  
The tape automatically stops approximately at the position at which you reset the counter to zero.



**Remarks etc.**

■ **Changing the Tape Counter Indication**

By changing the setting for [DISPLAY] on the [DISPLAY SETUP] Sub-Menu of the [VCR FUNCTIONS] or the [CAMERA FUNCTIONS] Main-Menu, the Counter Display Mode can be changed in the order shown in the above illustrations ①–④.

**Camera Mode (A)**

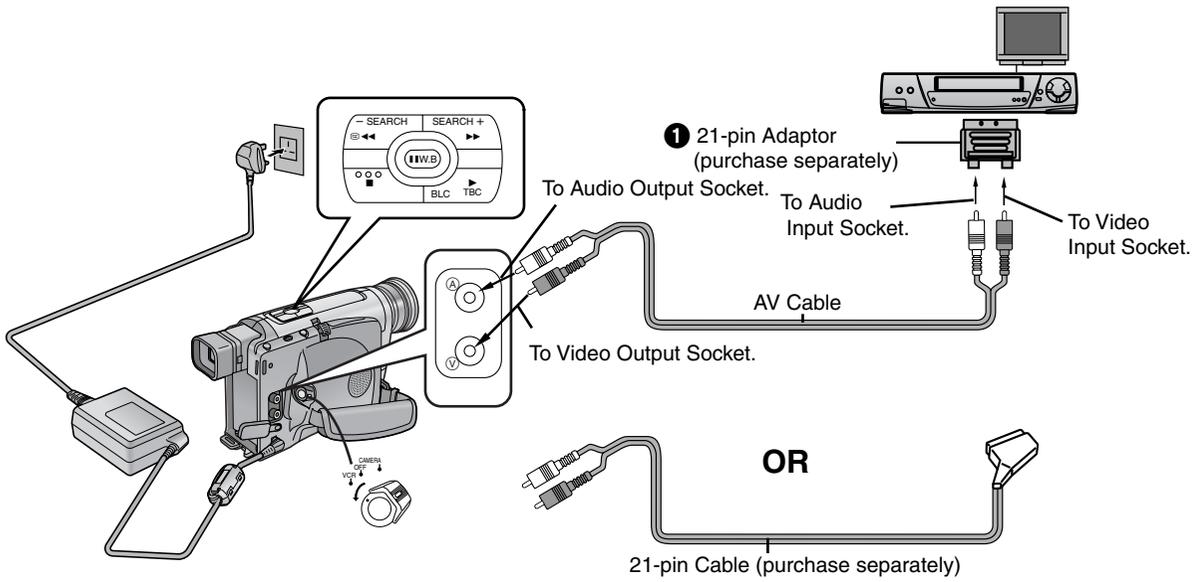
- ① **ALL:** Elapsed Tape Time Indication (initial setting)
- ② **MEMORY:** Memory Stop Indication and Elapsed Tape Time Indication
- ③ **PARTIAL:** No Counter Indication  
Only a few indications are displayed so that all parts of the picture can be seen clearly. However, when you turn on the Movie Camera, all indications initially appear for a few seconds to inform you of the selected settings.

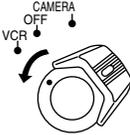
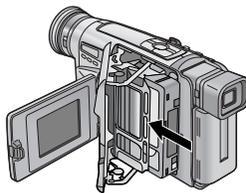
• In this condition, if you switch the Movie Camera over to the VCR Mode and then back to the Camera Mode, [ALL] is automatically selected for the Tape Counter Indication.

- ④ **OFF:** No Counter Indication  
In this mode, only the Operation Mode Indications and Warning/Alarm Indications can appear. However, when turning on the Movie Camera, all indications appear for a few seconds to inform you of the selected settings.

**VCR Mode (B)**

- ① **ALL:** Elapsed Tape Time Indication (initial setting)
- ② **MEMORY:** Memory Stop Indication and Elapsed Tape Time Indication
- ③ **OFF:** No Counter Indication  
In this mode, only the Operation Mode, Warning/Alarm, Insert Editing Mode and Audio Dubbing Mode Indications can appear.



Title	Procedure	
<p><b>Copying onto an VHS Cassette (Dubbing)</b></p> <p>By connecting the AV Cable (supplied), you can copy the cassette recorded with this Movie Camera onto a VCR.</p>	<p><b>1</b>  <b>Movie Camera:</b>            Set the [CAMERA/OFF/VCR] Switch to [VCR].</p> 	<p><b>2</b>  <b>Movie Camera:</b>            Insert the recorded cassette.</p> 
	<p><b>5</b>  <b>VCR:</b>            Start recording.</p> 	<p><b>6</b>  <b>VCR:</b>            Press the Pause or Stop Button to stop recording.</p> 

### 3

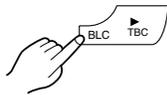
**VCR:**  
Insert an unrecorded  
cassette with intact  
erasure prevention tab.

As some settings  
(external input, tape  
speed, etc.) on the VCR  
are necessary, please  
refer to your VCR's  
operating instructions.



### 4

**Movie Camera:**  
Press the [▶] Button  
to start playback.

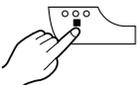


### Remarks etc.

- Also read the Operating Instructions of the VCR.
- If your VCR is not equipped with audio and video input sockets, an 21-pin Adaptor ❶ (purchase separately) is necessary. Consult your dealer. (When you use an 21-pin Adaptor, it is not necessary to connect the plug for the video signal of the AV Cable.)
- If your VCR is equipped with an Edit Switch, turn it on to ensure optimum picture quality of the dubbed cassette.
- As the picture quality on the dubbed cassette is slightly reduced, we recommend that you select the standard speed (SP Mode) on the VCR for dubbing. (SP means Standard Play.)
- For all additional scenes that you want to dub, follow steps 4 to 7.

### 7

**Movie Camera:**  
Press the [■] Button to  
stop playback.



## Optional Accessories

Optional Accessories are subject to change without notice.  
Some accessories are not available in some countries.

<b>Battery Charger</b> <b>VW-BCV1B</b> 	<b>Battery Pack (Lithium-Ion)</b> <b>CGR-V14S</b> 	<b>Battery Pack (Lithium-Ion)</b> <b>CGR-V26S</b> 	<b>Battery Pack (Lithium-Ion)</b> <b>CGR-V53S</b> 
<b>ND Filter</b> <b>VW-LND37E</b> 	<b>MC Protector</b> <b>VW-LMC37E</b> 	<b>Tele Conversion Lens</b> <b>VW-LT3714ME</b> 	<b>Wide Conversion Lens</b> <b>VW-LW3707ME</b> 
<b>Tripod</b> <b>VZ-CT55E</b> 	<b>Cassette Adaptor</b> <b>VW-TCA7E</b> 	<b>IR/Video DC Light (Halogen&amp;Infra-red)</b> <b>VZ-LDR10E</b> 	<b>Shoe Adaptor</b> <b>VW-SK11E</b> 

### IR/Video DC Light (VZ-LDR10E)

It requires the Shoe Adaptor (VW-SK11E) for attaching to the Movie Camera.



- Order accessory and consumable items for all Audio Visual Products with ease and confidence either by telephoning our Customer Care Centre on **08705 357357 Mon–Friday 9:00am–5:30pm**.
- Or go on line through our Internet Accessory ordering application at [www.panasonic.co.uk](http://www.panasonic.co.uk).
- Most major credit and debit cards accepted.
- All enquires transactions and distribution facilities are provided directly by Panasonic UK Ltd.
- It couldn't be simpler!

### Charging Time and Maximum Time for Continuous Recording

		NV-VZ14/VZ15		NV-RZ15	
CGR-V14S		(A)	1 h 40 min.	1 h 40 min.	
		(B)	2 h 55 min. (2 h 5 min.)	2 h 55 min.	
CGR-V26S		(A)	3 h 10 min.	3 h 10 min.	
		(B)	5 h 25 min. (4 h 5 min.)	5 h 25 min.	
CGR-V53S		(A)	6 h 20 min.	6 h 20 min.	
		(B)	10 h 50 min. (8 h.)	10 h 50 min.	

- (A) Charging Time for a Full Charge  
(B) Maximum Continuous Recording Time

(The times shown in the above chart are approximations. The figures in parentheses show the recording time when using the LCD Monitor.)

## **Cautions for Use**

### **Take care that no water enters the Movie Camera when using it in the rain and snow or on the beach.**

- The Movie Camera and the cassette could become damaged. (It might not be repairable.)
- If seawater has accidentally splashed on the Movie Camera, moisten a soft cloth with tap water, wring it well and wipe the camera body carefully with it. Then thoroughly wipe it with a soft, dry cloth.

### **Keep the Movie Camera away from magnetized equipment (TVs, video games, etc.).**

- Do not use near a cell phone because doing so may cause noise to adversely affect the picture and sound.
- If you use the Movie Camera on or near a TV, the electromagnetic radiation may cause picture and sound distortion.
- Strong magnetic fields generated by speakers and large motors may damage the recordings on the tape and distort the picture.
- The electromagnetic radiation from micro-processors can adversely influence the Movie Camera and cause picture and sound distortion.
- If the Movie Camera is adversely influenced by magnetized equipment and does not work correctly, turn the Movie Camera off, remove the Battery or disconnect the AC Adaptor and attach the Battery or connect the AC Adaptor again. Then turn the Movie Camera on.

### **Do not use the Movie Camera near a radio transmitter or high-voltage power line.**

- If you record near a radio transmitter or high-voltage power line, the recorded picture and sound may be adversely influenced.

### **Do not use the Movie Camera for surveillance and other industrial application.**

- If the Movie Camera is being used for a long time, the inside temperature could rise excessively and this may cause malfunction.
- This Movie Camera is not designed for industrial use.

### **Take care that no sand and fine dust enters the Movie Camera when using it on a beach or similar places.**

- Sand and dust could damage the Movie Camera and cassette. (Be careful when inserting and removing the cassette.)

### **Do not spray insecticide or volatile agents on the Movie Camera.**

- Such agents could deform the body and cause the surface coating to peel off.
- Do not leave the Movie Camera in direct contact with rubber or plastic products for a long time.

### **Do not use benzine, alcohol or thinner for cleaning.**

- They could deform the body and cause the surface coating to peel off.
- Before cleaning, remove the Battery or unplug the AC Mains Lead from the AC mains socket.
- Wipe the Movie Camera with a soft, clean cloth. To remove persistent stains, wipe with a cloth moistened with mild detergent diluted with water, and then finish with a dry cloth.

### **After use, always take out the cassette and remove the Battery or unplug the AC Mains Lead from the AC mains socket.**

- If you leave the cassette in the Movie Camera, the tape can become loosened and damaged.
- If you leave the battery attached to the Movie Camera for a long time, the voltage level may drop very low so that the Battery cannot be used any more even after charging.

### **Notes about the AC Adaptor**

- When the battery is warm, charging takes longer than usual.
- When you use the AC Adaptor near a radio, the radio reception may be distorted. Keep the AC Adaptor more than 1 metre away from the radio.
- When the AC Adaptor is in use, it may emit a whirring sound. However, this is normal.
- After use, be sure to disconnect the AC Mains Lead from the AC mains socket. (If you leave it connected, a small amount of electricity is consumed.)
- Do not handle with wet hands.

## ***Cautions for Use (cont.)***

### **■ Condensation**

**If Condensation Has Formed Inside the Movie Camera, Recording is Not Possible.**

#### **Symptoms of Condensation**

If the following symptoms occur, condensation has formed inside the Movie Camera.

- ① The Condensation Indication [] on the LCD Monitor or in the Viewfinder flashes.**  
After this indication flashes for a few seconds, the Movie Camera automatically turns off.
- ② When you turn on the Movie Camera, it turns off.**  
However, the Movie Camera also turns off when the Battery is discharged.

#### **Remedy**

- Wait a few hours before operating the Movie Camera again.  
(The actual time depends on the surrounding conditions.)
- Turn on the Movie Camera.
- Confirm that the Condensation Indication is not displayed any more.
- For added safety, wait about 1 more hour.

#### **Remarks about Condensation**

- Condensation can form if the Movie Camera is suddenly brought from cold surroundings to a place where it is hot or humid.
- Since condensation forms gradually, there may already be some condensation inside the Movie Camera even before the Condensation Indication begins to flash.
- In an extremely cold place, condensation may freeze and turn into frost. As the Movie Camera cannot detect frost, the Condensation Indication does not appear until the frost melts.

#### **Precautions against Condensation**

When moving it from a very cold place to a very warm place, keep it in a tightly closed plastic bag or similar to prevent condensation from forming.

### **■ Cautions for Transport**

- When not actually recording, carry the Movie Camera in a specially designed Carrying Case.
- Keep the packing materials. When transporting the Movie Camera in the future, pack it in the same way as it was when you purchased it.

### **■ Optimum Use of the Battery**

#### **Special Characteristics of the Battery**

This Battery is a rechargeable lithium-ion battery. Its ability to generate electric energy is based on an internal chemical reaction. This reaction is easily influenced by ambient temperature and humidity, and the useful operation time that the Battery can provide becomes shorter at high and low temperatures. When used in extremely cold surroundings, the Battery may only be able to provide approximately 5 minutes of operation time. If the Battery becomes extremely hot, a protection function is activated and prevents the use of the Battery for some time.

#### **After Use, Always Remove the Battery.**

Be sure to remove the Battery from the Movie Camera. (If it is attached to the Movie Camera, a small amount of electric current is consumed even if the Movie Camera is turned off.) Leaving the Battery attached to the Movie Camera for a very long time could cause it to become excessively discharged, so that it cannot be used any more even after charging.

#### **Discarding a Battery That Has Become Unusable**

- The usable life of the Battery is limited.
- Do not throw the Battery in a fire because it could explode.

#### **Keep the Battery's Terminals Clean.**

Be careful that the terminals do not get plugged up with dust, dirt or other substances. If you accidentally drop the Battery, confirm that the Battery itself and the terminals are not deformed. Attaching a deformed Battery to the Movie Camera could damage the Movie Camera.

# Glossary

## ■ Precautions for Storage

### Before Storing the Movie Camera, Take out the Cassette and Remove the Battery.

Store all equipment in a dry place where the temperature remains relatively constant. (Recommended temperature is 15°C–25°C and recommended relative humidity is 40%–60%.)

#### Movie Camera

- Wrap it with a soft cloth to prevent dust from entering.
- Never leave the Movie Camera in place with high temperature.

#### Battery

- Extremely low or high temperature shortens the Battery life.
- Storing it in places with oily smoke and a lot of dust could cause the terminals to get rusty, and this can result in a malfunction.
- **Do not allow metal objects (such as necklaces and hair pins) to touch the battery terminals. Short-circuiting may occur and generate heat, and touching it in this condition could inflict serious burns.**
- Store the Battery in discharged condition. If you store the Battery for a long time, we recommend that you charge it once a year and completely use up the charge before storing it again in discharged condition.

#### Cassette

- Rewind the tape to its beginning before storing. Leaving the cassette with the tape stopped halfway for more than 6 months (depending on the storing condition) loosens the tape. Be sure to rewind it to the beginning.
- Put the cassette in its case to store it. Dust, direct sunlight (ultraviolet rays) and humidity could damage the tape. Dust contains hard mineral particles and cassettes with dust damage the video heads and other parts of the Movie Camera. Make it a habit to always put the cassette back into its case.
- Completely wind the tape forward and then rewind it once every half year. Leaving the cassette for more than a year without winding/rewinding it may deform the cassette because of stretching and shrinking of the tape due to changes in temperature and humidity. Also, the tape may stick together.
- Do not place the cassette near strongly magnetized objects or equipment.
- The tape surface is coated with microscopic magnetic particles and they record signals. Such objects as magnetic necklaces and toys have stronger magnetic force than commonly thought, and this could erase the recorded contents and cause noise in picture and sound.

## ■ Other Useful Information

### LCD Monitor (NV-VZ14/VZ15 only)

- In places where big changes in temperature occur, condensation may form on the LCD Monitor. Wipe it with a soft, dry cloth.
- When the Movie Camera is very cold when turning it on, the picture on the LCD Monitor is darker than normally. However, as it reaches normal temperature, it regains its normal brightness.
- To remove fingerprints, wipe the LCD Monitor with a soft cloth.
- Do not expose the LCD Monitor to direct sunlight. When sunlight falls onto the LCD Monitor, it may be difficult to view the picture.

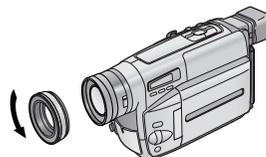
Extremely high precision technology is employed to produce the LCD Monitor. The result is more than 99.99% effective pixels with a mere 0.01% of the pixels inactive or always lit. However, this is not a malfunction and does not affect the recorded picture.

### Viewfinder

- Do not leave the Viewfinder or the Lens aimed at the sun. This could seriously damage internal parts.

### Lens Hood

- When you want to attach the Tele Conversion Lens (VW-LT3714ME, optional), the Wide Conversion Lens (VW-LW3707ME, optional), the ND Filter (VW-LND37E, optional) or the MC Protector (VW-LMC37E, optional), be sure to first remove the Lens Hood by turning it counterclockwise. If you attach the ND Filter or the MC Protector, you can attach the Lens Hood onto it.



- During recording with a filter or conversions lens attached, the four corners of the picture may become dark (vignetting effect), when you push the [W/T] Zoom Lever toward [W]. For details, please also read the operating instructions of the accessory being used.

## Glossary (cont.)

### ■ Focus

If you look at an object through a magnifying glass and move it closer or further away from your eye, you will reach a point where the object becomes clearly visible. Being focused or in focus means that the subject can be seen with optimum clarity and sharpness.

#### Human Eyes

Human eyes have lenses as well, and when we look at objects at different distances, the shape of these lenses changes automatically so that we can always see these objects clearly.

#### Movie Camera

The image of the subject enters the Movie Camera through the lens and is converted into an electric signal (video signal) for recording onto magnetic tape. The focus is adjusted either manually or automatically by moving a focusing lens.

#### Auto Focus Adjustment

The Auto Focus System automatically moves the internal focusing lens forward or backward and adjusts the focus so that the subject can be seen clearly.

The Auto Focus Adjustment has the following characteristics:

- It adjusts until the vertical contours of the subject are as sharp and clean as possible.
- It adjusts the focus on the subjects with strong contrast.
- It adjusts the focus on the subject in the centre of the \*LCD Monitor or Viewfinder. Unlike human eyes, the lens of the Movie Camera cannot instantaneously change the focus from a nearby to a distant subject and vice versa.

\*LCD Monitor: **NV-VZ14/VZ15 only**

For the following subjects and recording situations, the Auto Focus system cannot provide precise adjustment. Use the Manual Focus Mode instead. (p. 46)

#### ❶ Recording subjects with a part of it near the Movie Camera and another part far away from it

As the Auto Focus adjusts on the centre part of the image, it is often impossible to bring the nearby and distant parts of the subject into focus.

When you want to record a person with a distant mountain in the back, it is not possible to focus on both.

#### ❷ Recording subjects behind glass covered with dirt or dust

As the focus is adjusted on the dirty glass, the subject behind the glass is out of focus. When recording a subject across a street on which cars are running, the focus may be adjusted on the cars.

#### ❸ Recording subjects in dark surroundings

As the amount of light information entering through the lens is greatly reduced, the Movie Camera cannot adjust the focus precisely.

#### ❹ Recording subjects surrounded by objects with shiny surfaces or much light reflection

As the Movie Camera adjusts the focus on objects with shiny surfaces or much light reflection, the subject may go out of focus. Therefore, when recording at a lake or the sea, evening scenes, fireworks, or under special types of lighting, the subject may be out of focus.

#### ❺ Recording fast-moving subjects

As the internal focusing lens is moved mechanically, it cannot follow fast-moving subjects without delay.

Therefore, subjects like children running back and forth may temporarily go out of focus.

#### ❻ Subjects with weak contrast

As the Movie Camera adjusts the focus based on vertical contours in the picture, subjects with little contrast such as a white wall may be out of focus.

## ■ White Balance Adjustment

While most recording with a Movie Camera is probably done outdoors under sunlight, video recording is also done very often under artificial light sources, both indoors and outdoors. However, each of these light sources gives the subject slightly different colours.

### Human Eyes

Human eyes can easily adjust to different kinds of lighting and see an object with the same colours even under different lighting.

### Movie Camera

Unlike human eyes, the Movie Camera does not have the innate ability to adapt to changes in lighting, and they influence the colours being recorded. Therefore, depending on the light source, the picture would be recorded with a bluish or reddish tint. To minimise the influence of the lighting on the colours of the subject, an adjustment called White Balance Adjustment is necessary.

### White Balance Adjustment

The White Balance Adjustment determines the colour of the light and adjusts the colours so that white remains pure white. As white is the basic colour of the entire colour spectrum, if white is reproduced correctly, the other colours are correct and natural, too.

### Auto White Balance Adjustment

This Movie Camera stores the optimum settings for several common light sources in memory. The Movie Camera judges the recording situation by determining the tint of the light received through the lens and by the White Balance Sensor (p. 4), and it selects the setting for the most similar tint. This function is called Auto White Balance Adjustment.

However, as the white balance settings for only a few light sources are stored in memory, the white balance is not correctly adjusted for other lighting conditions.

For the range of different types of lighting within which the Auto White Balance Function can provide precise adjustment, refer to the chart. For recording under lighting conditions outside this range, the Auto White Balance Function does not work correctly, and the recorded picture has a red or blue cast. However, the same also applies, if the subject is lit by more than one light source, even if these light sources are within this range.

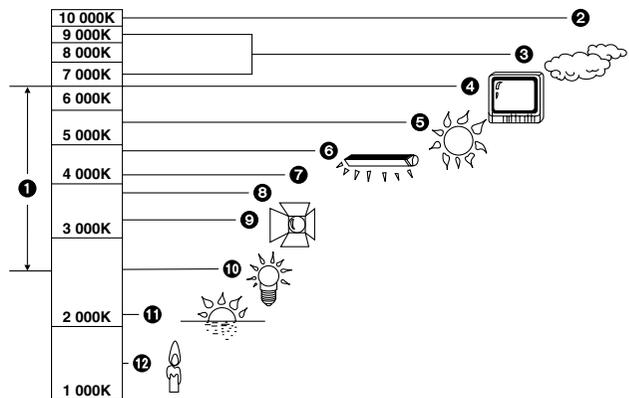
## ■ Colour Temperature

Every light source has its own colour temperature measured in Kelvin (K). The higher the Kelvin value, the more bluish the light; the lower the value, the more reddish the light. The Kelvin value is related to the tint of the light, but not directly to its brightness.

The range ① indicated in the illustration below shows the light sources for which this Movie Camera can provide precise white balance adjustment and, therefore, natural colours in the recorded pictures, when using the Full Auto Mode. For light sources outside this range, adjust the white balance manually (p. 44). Also, additional lighting may be necessary.

### ① Control range of this Movie Camera's Auto White Balance Adjustment Mode

- ② Blue sky
- ③ Cloudy sky (Rain)
- ④ TV screen
- ⑤ Sunlight
- ⑥ White fluorescent lamp
- ⑦ 2 hours after sunrise or before sunset
- ⑧ 1 hour after sunrise or before sunset
- ⑨ Halogen light bulb
- ⑩ Incandescent light bulb
- ⑪ Sunrise or sunset
- ⑫ Candlelight

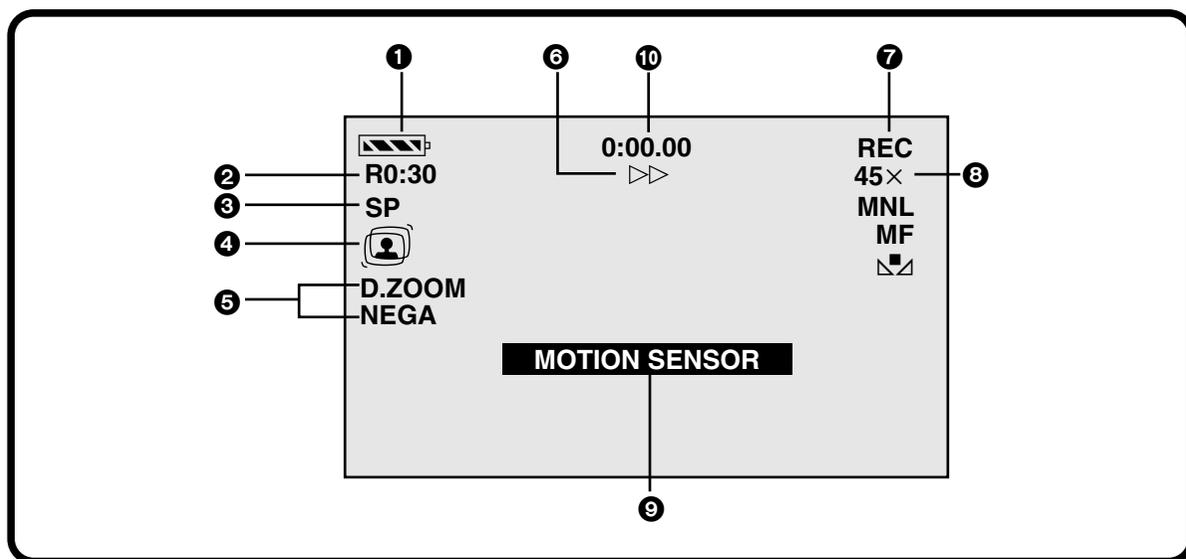


## ■ Demonstration Mode

When the Movie Camera is turned on and in the Camera Mode without any cassette inserted, and you leave it for 10 minutes without activating any function, it automatically switches over to the Demonstration Mode which demonstrates its many functions.

- You can also start the Demonstration Mode by setting [DEMO MODE] on the [OTHER FUNCTIONS] Sub-Menu of the [CAMERA FUNCTIONS] Main-Menu to [ON] and then exiting the menu.
- Pressing a button or displaying a menu temporarily suspends the Demonstration Mode. However, if you leave the Movie Camera in this condition without activating any function for more than approximately 10 minutes, the Demonstration Mode resumes.
- If you do not want the Demonstration Mode to be activated, set [DEMO MODE] on the [OTHER FUNCTIONS] Sub-Menu to [OFF].
- If you set the [CAMERA/OFF/VCR] Switch to [CAMERA] while pressing the [▶] Button, [DEMO MODE] on the Menu is automatically set to [ON] and the Demonstration Mode starts immediately.
- If you set the [CAMERA/OFF/VCR] Switch to [CAMERA] while pressing the [■] Button, [DEMO MODE] on the Menu is automatically set to [OFF].

# Indications



## 1 Remaining Battery Power

As the remaining battery power decreases, the indication changes as follows:



(When you are using the AC Adaptor, the indication may appear, however, this has no meaning in this case.)

## 2 Remaining Tape Time (p. 19)

The remaining tape time is displayed in minutes. (When it becomes less than 2 minutes, the indication starts to flash.)

- The displayed remaining tape time may be shorter than the actual remaining tape time.

## Tape Length (p. 19)

: The Tape Length Indication should be matched to the tape length of the inserted cassette (EC30, EC45 or EC60) to ensure correct indication of the remaining tape time.

## 3 Recording Speed Mode (p. 13)

The selected Recording Speed Mode is displayed.

SP: Standard-play Mode  
LP: Long-play Mode

## 4 Super Image Stabilizer Mode (p. 42)

: When the Super Image Stabilizer Function is activated, this indication is displayed.

## 5 Digital Zoom (p. 34)

D.ZOOM: When the Digital Zoom function is activated, this indication is displayed.

## Digital Effects (p. 32)

When a digital effect is activated, the corresponding indication is displayed.

## 6 Tape movement during recording (p. 21)

### 7 Tape Run Indications

- REC: Recording (p. 21)
- PAUSE: Recording Pause (p. 20)
- ▷: Playback (p. 27)/Camera Search in forward direction (p. 22)
- ||: Still playback (p. 29)
- ▷▷: Fast-forward (p. 26)
- ◁◁: Rewind (p. 26)
- CHK: Recording check (p. 22)
- STDBY: Motion-Sensor-Controlled Recording Function Stand-by Mode (p. 40)

- When you record with the LCD Monitor facing forward using the Mirror Mode, only the Remaining Battery Power Indication, the Recording Indication and the Recording Pause Indication appear. If the Indication appears, turn the LCD Monitor so that it faces backward and then confirm the actual Warnig/Alarm Indication. (NV-VZ14/VZ15 only)

## 8 Zoom Magnification (p. 24)

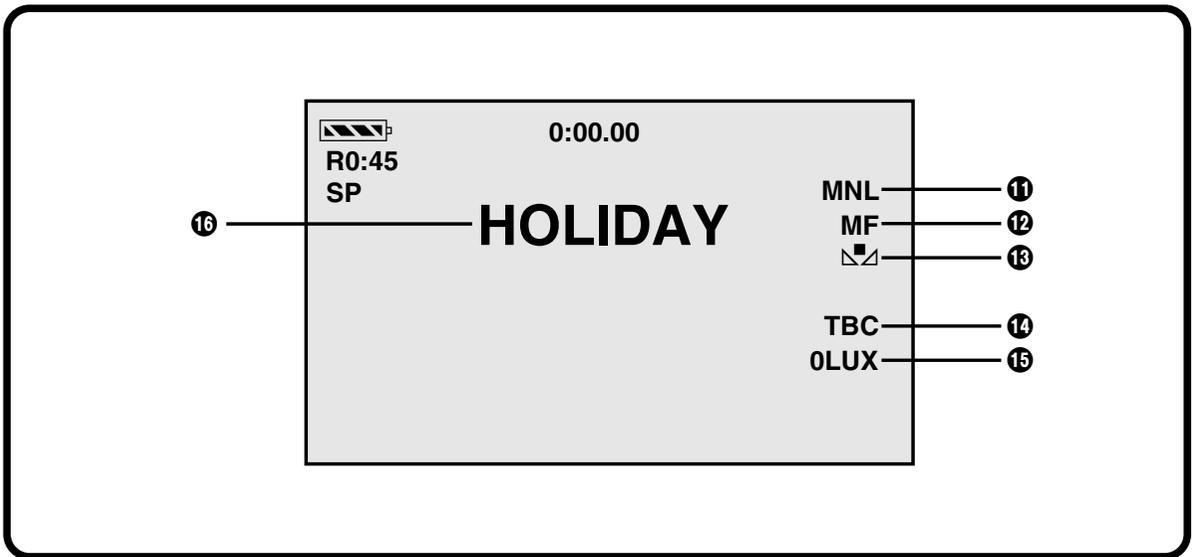
When you push the [W/T] Zoom Lever up or down, the Zoom Magnification Indication is displayed.

## 9 Motion-Sensor-Controlled Recording Function Stand-by Mode (p. 40)

When the Motion-Sensor-Controlled Recording Mode is activated, this indication is displayed.

## 10 Tape Counter

The Elapsed Tape Time, Memory Stop Function Indication is displayed. (p. 60)



**11 Recording Mode (p. 20)**

**AUTO:** When the Auto Mode is activated, this indication is displayed.

**MNL:** When the Manual Mode is activated, this indication is displayed.

**Programme AE Mode (p. 48)**

The Programme AE Function offers the following settings:

-  : Sports Mode
-  : Portrait Mode
-  : Low Light Mode
-  : Spotlight Mode
-  : Surf & Snow Mode

**12 Manual Focus (p. 46)**

If you select the Manual Focus Mode, the [MF] Indication is displayed.

**Tracking Adjustment Mode (p. 28)**

If you select the Tracking adjustment Mode, the [TRACK.] Indication is displayed.

**13 White Balance Mode (p. 44)**

 : When the White Balance Mode is activated, this indication is displayed.

When the Movie Camera is in the Auto Mode, the above indication is not displayed.

**14 Time Base Corrector (p. 27)**

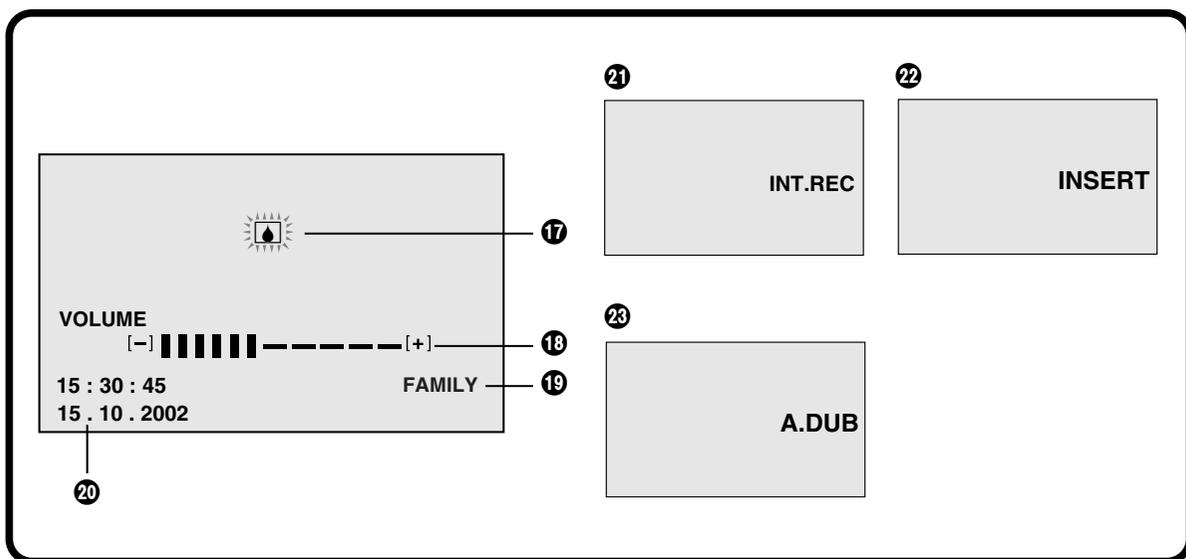
**TBC:** When the Time Base Corrector function is activated, this indication is displayed.

**15 0 Lux Night View Mode (p. 42)**

When the 0 Lux Night View Mode is activated, this indication is displayed.

**16 Title (large indication) (p. 54)**

This indication shows the selected pre-programmed large title.



**17 Warning/Alarm**

When any of the following indications lights or flashes, confirm the condition of the Movie Camera.

- : Condensation has occurred. (p. 66)
- : The erasure prevention tab of the inserted cassette is broken out. (p. 19)
- : No cassette is inserted. (p. 18)
- : The Battery is discharged. Charge it. (p. 7)
- : The Date and Time cannot be stored in memory if the built-in clock battery is exhausted. Consult your dealer for replacement, or set the Date and Time as necessary before you start recording. (p. 16)
- : The heads are dirty. (p. 76)
- : During recording, the tape has reached its end.

**18 Sound Volume (p. 27) (NV-VZ14/VZ15 only)**

Use this indication to adjust the volume of the playback sound from the built-in speaker. With the [VCR] Lamp lit, pressing the [-VOL+] Lever toward [W] or [T], the [VOLUME] Indication appears. Then press the [-VOL+] Lever toward [W] or [T] to adjust the volume.

**19 Title (small indication) (p. 54)**

This indication shows the selected pre-programmed small title.

**20 Date and Time (p. 24)**

The time is indicated in the 24-hour system.

**21 Interval Recording Mode (p. 38)**

When the Interval Recording Mode is activated, this indication is displayed.

**22 Insert Editing Mode (p. 50)**

When the Insert Editing Mode is activated, this indication is displayed.

**23 Audio Dubbing Mode (p. 50)**

When the Insert Editing Mode is activated, this indication is displayed.

# Specifications

## VHS-C Movie Camera

Information for your safety

<b>Power Source:</b>	DC 7.2V (Battery) DC 11.0V (via AC Adaptor)
<b>Power Consumption: (Battery Operation)</b>	Recording: <b>(NV-VZ14/VZ15)</b> 3.4 W (When using Viewfinder) 4.6 W (When using LCD Monitor) <b>(NV-RZ15)</b> 3.4 W

<b>Tape Format:</b>	VHS-C Cassette
<b>Recording/Playback Time:</b>	LP: 2 hours with EC60
<b>VIDEO</b>	
<b>Television System:</b>	CCIR: 625 lines, 50 fields PAL colour signal
<b>Output Level:</b>	VIDEO OUT (PHONO); 1.0 Vp-p, 75 ohm terminated
<b>AUDIO</b>	
<b>Output Level/ Impedance:</b>	AUDIO OUT (PHONO); -6 dBV (47 kohm loaded)/less than 1 kohm
<b>Audio Track:</b>	1 track (Normal – Monaural)
<b>Image Sensor:</b>	1/6-inch CCD Image Sensor
<b>Lens:</b>	18:1 Power Zoom Lens (optical capability), F1.8 Focal Length; 3.1 – 55.8 mm, Digital AI Auto Focus/Auto Iris Filter Diameter; 37 mm
<b>Monitor:</b>	<b>(NV-VZ14/VZ15 only)</b> 2.5-inch Colour LCD Monitor
<b>Viewfinder:</b>	0.24-inch Electronic Viewfinder
<b>Standard Illumination:</b>	1,400 lx
<b>Operating Temperature:</b>	0°C–40°C
<b>Operating Humidity:</b>	10%–80%
<b>Weight:</b>	<b>(NV-VZ14/VZ15)</b> Approx.900 g (without Battery) <b>(NV-RZ15)</b> Approx.810 g (without Battery)
<b>Dimensions:</b>	<b>(NV-VZ14/VZ15)</b> Approx.88 (W)×118 (H)×241 (D) mm <b>(NV-RZ15)</b> Approx.81 (W)×118 (H)×241 (D) mm

## AC Adaptor

Information for your safety

<b>Power Source:</b>	AC 110–240 V, 50/60 Hz
<b>Power Consumption:</b>	14 W
<b>DC Output:</b>	DC 11.0 V, 1.0 A

<b>Weight:</b>	Approx. 140 g (without AC Mains Lead)
<b>Dimensions:</b>	Approx. 60 (W)×32 (H)×97 (D) mm

Weight and dimensions shown are approximate.  
Specifications are subject to change without notice.

# Before Requesting Service (Problems & Solutions)

## Power Supply

### P1: The Movie Camera does not turn on.

S1: Is the Battery or the AC Adaptor connected correctly? Confirm the connection. (p. 6)

### P2: The Movie Camera has turned off automatically.

S2: If you leave the Movie Camera in the Recording Pause Mode for more than 6 minutes, it automatically switches off to protect the tape and to conserve battery power. (p. 21) Set the [CAMERA/OFF/VCR] Switch to [OFF], and then set it [CAMERA] again.

### P3: The Movie Camera quickly turns off.

S3-1: Is the Battery discharged? When the Remaining Battery Operation Time Indication shows the [  ] Indication is flashing, the Battery is discharged. Charge the Battery or attach a fully charged Battery. (p. 6)

S3-2: Has condensation formed? If the Movie Camera is brought from a cold to a warm place, condensation may form inside. In this case, the Movie Camera automatically switches off and no operation can be performed except taking out the cassette. Wait until the Condensation Indication disappears. (approximately 2 - 3 hours) (p. 66)

## Battery

### P1: The Battery discharges quickly.

S1-1: Is the Battery fully charged? Charge it until the [CHARGE] Lamp on the Movie Camera goes off. (p. 6)

S1-2: Are you using the Battery in a place where the temperature is very low? The ambient temperature greatly influences the Battery's performance. Its operation time becomes shorter in a cold place. (p. 67)

S1-3: Has the Battery reached the end of its service life? The service life of the Battery is limited. It depends on the way the Battery is used, but when the operation time even after proper charging is too short for normal use, the service life of the Battery has reached its end.

## Normal Recording

### P1: Recording cannot be started even though the Movie Camera is supplied with power and the cassette is inserted correctly.

S1-1: The tab of the inserted cassette is broken out. Insert a cassette with intact tab. Or cover the hole where the tab was with two layers of adhesive tape. (p. 18)

S1-2: Has the tape reached its end? Insert a new cassette. (p. 18)

S1-3: Is the Movie Camera turned on? (p. 20)

S1-4: Is the [CAMERA/OFF/VCR] Switch set to [CAMERA]? When it is set to [VCR], recording is not possible. (p. 20)

S1-5: Is the Condensation Indication [  ] displayed? When condensation has formed, no functions except taking out the cassette can be operated. Wait until the Condensation Indication disappears. (p. 66)

## Other Recording

### P1: No picture appears in the Viewfinder. (NV-VZ14/VZ15 only)

S1: The LCD Monitor is open (Except when recording with the LCD Monitor facing forward). Securely close the LCD Monitor. (p. 8)

### P2: Picture on the LCD Monitor is not clear. (NV-VZ14/VZ15 only)

S2: Picture quality is not properly adjusted. Adjust picture quality. (p. 17)

### P3: The Auto Focus Function does not work.

S3-1: Is the Manual Focus Mode selected? If you select the Auto Focus Mode, the focus is adjusted automatically. (p. 46)

S3-2: Is the subject or recording situation suitable for the Auto Focus Mode? The Auto Focus Function does not work correctly for some kinds of subjects and recording situations. In this case, use the Manual Focus Mode to adjust the focus. (p. 68)

## Cassette

**P1: The Remaining Tape Time Indication is not correct.**

S1: Is the tape length of the inserted cassette correctly selected? Select the correct tape length. (p. 19)

**P2: The Movie Camera and cassettes underwent security X-ray inspection at an airport. Does this affect the cassettes?**

S2: No, this has no negative influence on the Movie Camera or the cassettes.

**P3: When playing back a cassette that was stored for some time, the picture is distorted.**

S3: The cassette was stored in an unsuitable place (dusty, humid, hot, etc.) or near strongly magnetized objects or equipment. Unfortunately, there is no remedy. Always store the cassettes correctly. (p. 67)

## Playback (Picture)

**P1: No playback picture is reproduced when pressing the [▶] Button.**

S1: Is the [CAMERA/OFF/VCR] Switch set to [VCR]? When it is set to [CAMERA], playback is not possible. (p. 26)

**P2: The playback picture is distorted or contains noise bars.**

S2-1: The tape in the cassette is loose. Tighten it. (p. 18)

S2-2: The video heads are dirty. Consult Movie Camera to qualified service personnel.

S2-3: The tracking is not adjusted correctly. Adjust the tracking correctly. (p. 28)

**P3: The Movie Camera is correctly connected to a TV, but no playback picture is reproduced.**

S3: Did you select "Video Input" on the TV? Carefully read the operating instructions for your TV and select the channel that matches the input sockets used for connection.

**P4: The playback picture is not in colour.**

S4: The colour adjustment on the TV is not made properly. Adjust the colour control on the TV.

## Playback (Sound) (NV-VZ14/VZ15 only)

**P1: No sound is played back from the Movie Camera's built-in speaker.**

S1: Is the volume set too low? With the [VCR] Lamp lit, push the [-VOL+] Lever, so that the [VOLUME] Indication appears. Then push the [-VOL+] Lever toward [+] to increase the volume or push it toward to [-] to decrease the volume. (p. 27)

## Others

**P1: The cassette cannot be taken out.**

S1-1: Is the Movie Camera supplied with power? Is the AC Adaptor correctly connected or the Battery correctly attached? To remove the cassette, the Movie Camera must be supplied with power, however, it is not necessary to set the [CAMERA/OFF/VCR] Switch to [CAMERA] or [VCR]. (p. 6)

S1-2: The attached Battery may be discharged. Replace it with a charged Battery. (p. 6)

**P2: No operation except taking out the cassette can be performed.**

S2: Is the Condensation Indication [☾] displayed? If condensation has formed inside the Movie Camera, it automatically switches off and prevents all operations except taking out the cassette. Wait until the Condensation Indication disappears. (p. 66)

**P3: The Remote Controller does not work. (NV-RZ15/VZ15 only)**

S3: The batteries in the Remote Controller are exhausted. Replace them with new "AAA", "UM-4", "R03" type batteries. (p. 53)

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